

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION

REMBRANDT WIRELESS	*	Civil Docket No.
TECHNOLOGIES, LP,	*	2:13-CV-213
	*	Marshall, Texas
Plaintiff,	*	
VS.	*	
	*	
SAMSUNG ELECTRONICS CO. LTD,;	*	
SAMSUNG ELECTRONICS	*	
AMERICA, LLC; SAMSUNG	*	
TELECOMMUNICATIONS AMERICA,	*	
LLC; SAMSUNG AUSTIN	*	
SEMICONDUCTOR, LLC,	*	
	*	February 9, 2015
Defendants.	*	1:16 p.m.

TRANSCRIPT OF JURY TRIAL  
BEFORE THE HONORABLE RODNEY GILSTRAP  
UNITED STATES DISTRICT COURT

APPEARANCES:

FOR THE PLAINTIFF:	DEMETRIOS ANAIPAKOS
	AMIR ALAVI
	JAMIE A. AYCOCK
	Ahmad, Zavitsanos, Anaipakos,
	Alavi & Mensing, P.C.
	1221 McKinney Street
	Suite 3460
	Houston, TX 77010

APPEARANCES CONTINUED ON THE NEXT PAGE:

COURT REPORTER:	SHELLY HOLMES, CSR, TCRR
	Official Court Reporter
	100 East Houston, Suite 125
	Marshall, TX 75670
	903/923-7464

(Proceedings recorded by mechanical stenography,  
transcript produced on CAT system.)

1 APPEARANCES CONTINUED:

2 FOR THE PLAINTIFF:

MICHAEL F. HEIM  
ERIC ENGER  
MIRANDA Y. JONES  
BLAINE A. LARSON  
Heim, Payne & Chorush, LLP  
600 Travis Street, Suite 6710  
Houston, TX 77002-2912

6 T. JOHN WARD, JR.  
Ward & Smith Law Firm  
1127 Judson Road, Suite 220  
Longview, TX 75601

9 FOR THE DEFENDANTS:

MICHAEL C. SMITH  
Seibman, Burg, Phillips &  
Smith, LLP  
113 E. Austin Street  
P.O. Box 1556  
Marshall, TX 75673

13 JEFFREY K. SHERWOOD  
DANIEL G. CARDY  
JI YOUNG PARK  
Dickstein Shapiro LLP  
1825 Eye Street NW  
Washington, DC 20006-5403

16 GERARD A. HADDAD  
JENNIFER BIANROSA  
Dickstein Shapiro LLP  
1633 Broadway  
New York, NY 10019

19 JEFFREY A. MILLER  
Dickstein Shapiro LLP  
1842 Page Mill Road, Suite 150  
Palo Alto, CA 94304

22 JESSE J. JENNER  
BRIAN P. BIGGINGER  
DEANNE K. CEVASCO  
VINCENT Y. LING  
Ropes & Gray, LLP  
1211 Avenue of the Americas  
New York, NY 10036

1 APPEARANCES CONTINUED:

2 FOR THE DEFENDANTS: GABRIELLE E. HIGGINS  
3 REBECCA R. HERMES  
4 Ropes & Gray LLP  
5 1900 University Avenue  
6 6th Floor  
7 East Palo Alto, CA 94303

8 P R O C E E D I N G S

9 (Jury out.)

10 COURT SECURITY OFFICER: All rise.

11 THE COURT: Be seated, please.

12 All right. Counsel, before we bring the jury  
13 in, I understand there's an issue about several boxes of  
14 exhibits. Let me hear briefly, very briefly, from both  
15 sides about that.

16 MR. ALAVI: Your Honor --

17 THE COURT: From the podium, please.

18 MR. ALAVI: Your Honor, may it please the  
19 Court.

20 The issue relates to documents that are called  
21 PICS. These are documents that show that the accused  
22 products follow the EDR 2.0 specification, or greater,  
23 from the Bluetooth SIG.

24 There are roughly 400 products accused. We're  
25 trying to figure out the Court's procedures on what  
26 constitutes use of a document with a witness.

27 We have an expert who has reviewed each of

1 those PICS and will include all of the products, the 400  
2 products, practice the EDR 2.0+EDR -- 2.0+EDR standard.

3 We -- we don't have enough time in 10 hours to  
4 go document-by-document. Here's the PIC for this  
5 product; here's the product number; and here's where it  
6 shows that it practices this standard.

7 So what we thought we would do is provide all  
8 400 of the PICS to the expert. He would go through --  
9 in detail through one to explain how the product work --  
10 works and how this shows it and then testify that these  
11 other 400 are -- and give the exhibit numbers -- are the  
12 PICS for the other products in this case and they all  
13 show the same thing.

14 So there's a question for the Court, because I  
15 think Samsung has indicated that would be insufficient  
16 use for purposes of having the documents go back as part  
17 of the record.

18 And then the second piece is we understand --  
19 we completely understand that the Court does not want  
20 seven boxes of documents in front of the witness stand  
21 for fire code and other types of reasons, but we'd  
22 probably have to get past this threshold issue first to  
23 see how we deal with the seven boxes.

24 THE COURT: And this is with your second  
25 witness?

1 MR. ALAVI: With our second witness, Your  
2 Honor.

3 THE COURT: What's Samsung's response?

4 MR. SMITH: Your Honor, the only problem is we  
5 didn't -- we didn't know what the Court's threshold was  
6 for use. My -- my -- if the Court intends it to be the  
7 witness takes it out and uses it on his testimony,  
8 that's what I've been familiar with.

9 I don't know what the Court wants to do about  
10 an expert pointing to boxes and saying, basically, I  
11 reviewed that.

12 Of course, he can offer his opinions on them,  
13 and there's not a substantive objection to the PICS.  
14 We -- I just wanted to defer to whatever the Court's  
15 practice is so that we knew going into it what was  
16 sufficient to get exhibits into the record.

17 THE COURT: Well, the Court's usual standard  
18 on these things is, are they published to the jury, and  
19 that does not require that each page of each document be  
20 physically flipped to and shown and discussed.

21 If the Plaintiffs follow the kind of procedure  
22 that they've outlined where he goes through a portion of  
23 these in great detail and then identifies the others --  
24 and I'm happy to let you take seven different boxes one  
25 at a time and let him look through him; we'll work with

1 the CSO -- and he identifies what's in there and that he  
2 has examined each part of it, and he testifies to it on  
3 a more or less global basis, in my view, that's adequate  
4 publication to be a part of the record.

5 MR. SMITH: If that's the case, Your Honor,  
6 then we -- we don't believe that the individual boxes  
7 need to go up. If the Court's going to receive a  
8 reference to the contents of a box to be sufficient, it  
9 would save time if --

10 THE COURT: Well, in light of the fact that  
11 you've raised the issue, I think it's better if the  
12 witness actually takes the box, looks in it, and  
13 identifies what's in it so we don't have any question  
14 about, well, those were the wrong boxes or this, that,  
15 or the other.

16 And it's not going to take a lot of time to  
17 carry six additional boxes back and forth. Plaintiffs  
18 can start out with the box they intend to use in greater  
19 detail at the witness stand with the witness.

20 And if you will marshal those other boxes at a  
21 place in the courtroom at that time that's not  
22 disruptive, then you simply need to ask leave to  
23 approach, come by to pick up the next box, hand it to  
24 Mr. Wolverton, he'll carry it to the witness and bring  
25 you back the prior box.

1           And then you can go through what's in those  
2 additional boxes. Did he look at them; did he consider  
3 them; what are they; or whatever questions you want to  
4 ask.

5           And that may take a little more time, but it's  
6 not going to take a substantial amount of time. And  
7 that way there shouldn't be any question in anybody's  
8 mind the witness has identified them and published them  
9 to the jury.

10           Anybody -- any questions about that procedure?

11           MR. SMITH: No, Your Honor.

12           THE COURT: Okay. Do we have any other wishes  
13 before we bring the jury in?

14           MR. ALAVI: Not from the Plaintiffs, Your  
15 Honor.

16           THE COURT: Okay.

17           MR. SMITH: Not from the Defendants, Your  
18 Honor.

19           THE COURT: As local counsel is probably  
20 aware, it's the Court's practice to give my preliminary  
21 instructions, including opening arguments, and then I'll  
22 ask if anyone wants to invoke the Rule, and we'll swear  
23 the witnesses that are present as a group.

24           Anybody has any problem with that, speak now  
25 or forever hold your peace.

1 All right. Then in that case, Mr. Wolverton,  
2 bring in the jury.

3 COURT SECURITY OFFICER: All rise for the  
4 jury.

5 (Jury in.)

6 THE COURT: Welcome back, ladies and  
7 gentlemen. Please be seated.

8 Thank you for being on time. We're going to  
9 proceed along the lines I discussed in jury selection  
10 with you. Going forward, it will be my attempt to start  
11 each day around 8:30 in the morning. It will be my  
12 attempt to stop each day around 5:30, give or take.

13 Those aren't exact. I don't cut people off in  
14 the middle of a sentence because it happens to be  
15 exactly 5:30 p.m., but I will be looking for a  
16 convenient time to break at that time of the day.

17 And I'll be looking to get us started as close  
18 to 8:30 each morning as I can so that we can get through  
19 the material that we have in hopes of being able to  
20 allow you to return a verdict this week and then not  
21 carry over into the next week.

22 Now, I have some preliminary instructions that  
23 I want to give you before we start with the opening  
24 statements from the lawyers and then get on to the  
25 evidence.



1           You've now been sworn as the jurors in this  
2 case. And as such, you are the sole judges of the  
3 facts. You'll decide what all the facts are in this  
4 case.

5           As the Judge, I will give you instruction on  
6 the law. I will handle questions of evidence and  
7 procedure, and I will oversee the flow of the trial and  
8 maintain the decorum of the courtroom.

9           At the end of the evidence, I'll give you  
10 detailed instructions on the law to apply in deciding  
11 the case. And I'll give you a list of questions that  
12 you are then to answer.

13           This list of questions is called the verdict  
14 form. Your answers to those questions will need to be  
15 unanimous, and those unanimous answers will constitute  
16 the verdict in this case.

17           Now, I want to tell you briefly what this case  
18 is about. This case involves a dispute regarding  
19 certain United States patents. I know that you've seen  
20 the patent film. I know you have those instructions,  
21 but I want to discuss with you on the record about a  
22 patent and how one is obtained.

23           Patents are either granted or denied by the  
24 United States Patent and Trademark Office, often called  
25 the PTO. And many times I will refer simply to the PTO,

1 meaning the U.S. Patent and Trademark Office.

2 A valid United States patent gives the  
3 patent-holder the right for up to 20 years from the date  
4 of the patent application, the date the patent  
5 application is filed, to prevent others from making,  
6 using, offering to sell, or selling the patented  
7 invention within the United States or importing it into  
8 the United States without the patent-holder's  
9 permission.

10 A patent is a form of property called  
11 intellectual property. Like other forms of property, a  
12 patent can be bought or sold. A violation of the  
13 patent-holder's rights is called infringement.

14 The patent-holder may try to enforce a patent  
15 against persons it believes to be infringers by a  
16 lawsuit filed in federal court. That's what we have in  
17 this case.

18 The process of obtaining a patent is called  
19 patent prosecution. To obtain a patent, one must first  
20 file an application with the PTO. The PTO is an agency  
21 of the United States Government that employs trained  
22 Examiners to review patents and -- or to review  
23 applications for patents.

24 The -- the application includes what is called  
25 a specification. The specification contains a written

1 description of the claimed invention, telling what the  
2 invention is, how it works, how to make it, and how to  
3 use it.

4           The specification concludes or ends with one  
5 or more numbered sentences. These numbered sentences  
6 are the patent claims. When a patent is granted by the  
7 Patent and Trademark Office, the claims define the  
8 boundaries of its protection and give notice to the  
9 public of those boundaries.

10           After the applicant files the application, an  
11 Examiner reviews the application to determine whether or  
12 not the claims are patentable -- that is to say,  
13 appropriate for patent protection -- and whether or not  
14 the specification adequately describes the invention  
15 claimed.

16           In examining a patent application, the  
17 Examiner reviews certain information about the state of  
18 the technology at the time the application was filed.

19           The PTO searches for and reviews this type of  
20 information that is publicly available or that is  
21 submitted by the applicant. This type of information is  
22 called prior art.

23           The Examiner reviews this prior art to  
24 determine whether or not the invention is truly an  
25 advance over the state of the art at the time. Prior

1 art is defined by law, and I will give you, at a later  
2 time, specific instructions on what constitutes prior  
3 art.

4           However, in general, prior art includes  
5 information that demonstrates the state of the  
6 technology that existed before the claimed invention was  
7 made or before the application for the patent was filed.

8           A patent contains a list of certain prior art  
9 that the Examiner has considered. The items on this  
10 list are called the cited references.

11           After the prior art search and examination of  
12 the application, the Examiner informs the applicant in  
13 writing of what the Examiner has found and whether the  
14 Examiner considers any claim to be patentable, thus  
15 would be allowed. This writing from the Examiner is  
16 called an Office Action.

17           If the Examiner rejects the claims, the  
18 applicant has the opportunity to respond to the Examiner  
19 and try to persuade the Examiner to allow the claims.  
20 The applicant also has a chance to change or amend the  
21 claims or submit new claims.

22           This process between the applicant and the  
23 Examiner goes back and forth for some time until the  
24 Examiner is satisfied that the application meets the  
25 requirements for a valid patent. And in that case, the

1 application issues as a United States patent.

2 Or in the alternative, if the Examiner  
3 ultimately concludes that the application should be  
4 rejected, in which case no patent is issued.

5 Sometimes patents are issued after appeals  
6 within the Patent and Trademark Office or to a court.  
7 The papers generated by these communications back and  
8 forth between the Examiner and the applicant are called  
9 the prosecution history.

10 The fact that the PTO grants a patent does not  
11 necessarily mean that any invention claimed in the  
12 patent, in fact, deserves the protection of a patent.

13 While the issued patent is presumed valid  
14 under the law, a person accused of infringement has the  
15 right to argue here in federal court that the claimed  
16 invention in a patent is invalid.

17 It's your job as the jury to consider the  
18 evidence presented by the parties and determine  
19 independently and for yourselves whether or not the  
20 Defendant has proven by clear and convincing evidence  
21 that the patent is invalid.

22 To help you follow the evidence, I'll give you  
23 a brief summary of the positions of the parties.

24 The Plaintiff, Rembrandt Wireless Technology,  
25 and patent owner in this case -- I'll often refer to

1 simply as Rembrandt -- has brought this action.

2           The Defendants are Samsung Electronics  
3 Company, Limited; Samsung Electronics America, Inc.; and  
4 Samsung Austin Semiconductor, LLC, which I'll refer to  
5 these parties collectively as simply Samsung. They are  
6 the Defendants.

7           The Plaintiff, Rembrandt, contends that  
8 certain claims of the following patents have been  
9 infringed.

10           The case involves United States Patent  
11 No. 8,023,580, referred to often as simply the '580  
12 patent, and United States Patent No. 8,457,228, referred  
13 to, in shorthand, as simply the '228 patent.

14           These patents may refer -- may be referred to  
15 jointly as the patents-in-suit. The named inventor of  
16 the patents-in-suit is Mr. Gordon Bremer.

17           The claims that Rembrandt contends have been  
18 infringed have been referred to as the asserted claims.  
19 Over the course of the trial, you're -- you will learn  
20 more about which claims are asserted against Samsung.

21           Rembrandt filed suit in this court seeking  
22 money damages from Samsung for allegedly infringing the  
23 patents-in-suit by making, selling, or offering to sell  
24 in the United States products that Rembrandt argues are  
25 covered by the asserted claims.

1           The products that are alleged to infringe are  
2 Samsung products that comply with Bluetooth  
3 specifications and that include enhanced -- include an  
4 enhanced data rate or EDR. I may refer to these simply  
5 as the accused products.

6           Rembrandt argues that Samsung has infringed  
7 the patents-in-suit. Rembrandt seeks damages in the  
8 form of a reasonable royalty to compensate it for the  
9 alleged infringement.

10           Samsung denies that they are infringing any of  
11 the asserted claims of the patents-in-suit. Samsung  
12 further denies that Rembrandt is entitled to any  
13 damages.

14           Additionally, Samsung contends that the  
15 asserted claims are invalid in one or -- or more  
16 grounds.

17           Invalidity is a defense to infringement.  
18 Therefore, even though the U.S. Patent and Trademark  
19 Office or PTO has allowed the asserted claims, you, the  
20 jury, must decide whether or not those claims are  
21 invalid.

22           Your job is to decide whether the asserted  
23 claims have been infringed and whether the asserted  
24 claims of the patents-in-suit are invalid.

25           If you decide that any claim of the

1 patents-in-suit have -- has been infringed and is not  
2 invalid, you'll then need to decide what amount of money  
3 damages are to be awarded to Rembrandt as compensation  
4 for such infringement.

5 Now, my job in this case is to tell you what  
6 the law is, handle the rulings on evidence and  
7 procedure, and conduct the trial as efficiently and  
8 effectively as possible.

9 In determining the law, it is specifically my  
10 job to determine the meaning of any of the claim  
11 language from within the asserted -- the asserted  
12 patents that needs interpretation.

13 I've already determined the meaning of the  
14 claims in the patent -- of the patents-in-suit, and you  
15 must accept those meanings that I give you and use those  
16 meanings when you decide whether any particular claim  
17 has or has not been infringed and whether or not any  
18 claim is invalid.

19 You'll be given a document in a moment which  
20 reflects those meanings that I have arrived at.

21 For any claim term for which I have not  
22 provided you with a definition or a construction, you  
23 should apply the plain and ordinary meaning.

24 If I provided you with a definition, however,  
25 you are to apply my definition to those terms throughout



1 the case.

2           However, my interpretation of the language of  
3 the claims should not be taken as an indication by you  
4 that I have a personal opinion or any opinion at all  
5 regarding issues such as infringement and invalidity.  
6 Those issues are yours alone to decide as the jury in  
7 this case.

8           I'll provide you with more detailed  
9 instruction on the meaning of the claims before you  
10 retire to deliberate and reach your verdict.

11           In the -- in deciding the issues that are  
12 before you, you'll be asked to consider specific legal  
13 rules. And I'll give you an overview of those rules  
14 now, and then at the -- at the -- at the conclusion of  
15 the case, I'll give you much more detailed instructions.

16           The first issue you'll be asked to decide is  
17 whether Samsung has infringed any of the asserted claims  
18 of the asserted patents. Infringement is assessed on a  
19 claim-by-claim basis, and Rembrandt must show by a  
20 preponderance of the evidence that a claim has been  
21 infringed.

22           Accordingly, there may be infringement as to  
23 one claim but no infringement as to another claim.  
24 There are also a few different ways that a patent can be  
25 infringed. I'll explain -- explain the requirements for

1 each of these types of infringement to you in detail at  
2 the conclusion of the trial.

3 In general, though, Samsung may infringe the  
4 asserted patents by making, using, selling, or offering  
5 for sale in the United States or importing into the  
6 United States a product meeting all the requirements of  
7 a claim of the asserted patent.

8 I'll provide you with more detailed  
9 instructions on the requirements of infringement at the  
10 conclusion of the case.

11 Another issue that you'll be asked to decide  
12 is whether the asserted patent or patents is invalid. A  
13 patent is presumed to be valid, but may be found to be  
14 invalid for a number of reasons, including because it  
15 claims subject matter that is not new or is obvious.

16 For a patent claim to be invalid because it is  
17 not new, Samsung must show by clear and convincing  
18 evidence that all of the elements of the claim are  
19 sufficiently described in a single previous printed  
20 publication or patent. We call these items prior art.  
21 If a claim is not new, it is said to be anticipated.

22 Another way that a claim can be found to be  
23 invalid is that it may have been obvious. Even though a  
24 claim is not anticipated because every element of a  
25 claim is not shown or sufficiently described in a single

1 piece of prior art, the claim may still be invalid if it  
2 would have been obvious to a person of ordinary skill in  
3 the field of technology of the patent at the relevant  
4 time.

5           You'll need to consider a number of questions  
6 in deciding whether the inventions claimed in the  
7 asserted patents are obvious. And I'll provide you with  
8 more detailed instructions on these questions at the  
9 conclusion of the trial.

10           A patent may also be invalid if its  
11 description in the specification does not meet certain  
12 requirements. To be valid, a patent must meet the  
13 written description requirement.

14           In order to meet this written description  
15 requirement, the description of the invention in the  
16 specification portion of the patent must be detailed  
17 enough to demonstrate that the applicant actually  
18 possessed the invention as broadly as claimed in the  
19 claims of the issued patent.

20           If you decide that any claim of the  
21 patents-in-suit has been infringed and is not invalid,  
22 that is, the presumption of validity has survived, then  
23 you will need to decide what amount of money damages are  
24 to be awarded to Rembrandt to compensate it for the  
25 infringement.

1           A damage award must be adequate to compensate  
2 the patent-holder for the infringement, but in no event  
3 may the damage award be less than what the patent-holder  
4 would have received had it been paid a reasonable  
5 royalty for the use of its patent.

6           I'll instruct you later on the meaning of a  
7 reasonable royalty.

8           The damages you award are meant to compensate  
9 the patent-holder and not to punish the Defendant. You  
10 may not include in your award any additional amount as a  
11 fine or penalty above what is necessary to fully  
12 compensate the patent-holder for the infringement.

13           I'll give you more detailed instructions on  
14 the calculation of damages at the conclusion of the  
15 trial.

16           Now, ladies and gentlemen, through the process  
17 of this trial, you're going to be hearing from a number  
18 of witnesses, and I want you to keep an open mind while  
19 you're listening to the evidence and not decide any  
20 facts until you have heard all of the evidence.

21           While the witnesses are testifying, remember  
22 that you will have to decide the degree of credibility  
23 and believability to allocate to each witness and to the  
24 evidence.

25           So while the witnesses are testifying, you

1 should be thinking about and asking yourselves things  
2 like this: Does the witness impress you as being  
3 truthful?

4 Does he or she have a reason not to tell the  
5 truth?

6 Does he or she have any personal interest in  
7 the outcome of the case?

8 Does the witness seem to have a good memory?

9 Did he or she have the opportunity and ability  
10 to observe accurately the things that they testified  
11 about?

12 Did the witness appear to understand the  
13 questions clearly and answer them directly?

14 And, of course, does the witness's testimony  
15 differ from the testimony of other witnesses, and if it  
16 does, how does it differ?

17 These are some of the kinds of thing that you  
18 should be thinking about while you're listening to each  
19 of the witnesses during the trial.

20 I also want to talk to you briefly about  
21 expert witnesses.

22 When knowledge of a technical subject may be  
23 helpful to you as the jury, a person who has special  
24 training and experience in that particular field -- we  
25 refer to them as an expert witness -- is permitted to

1 testify to you about his or her opinions on technical  
2 matters.

3           However, you're not required to accept an  
4 expert's or any other witness's opinions at all. It's  
5 up to you to decide whether to believe that an expert  
6 witness or any witness, for that matter, is correct or  
7 incorrect or whether or not you want to believe what  
8 they say.

9           I anticipate that there will be expert  
10 witnesses testifying in support of each side in this  
11 case, but it will be up to you to listen to their  
12 qualifications, and when they give an opinion and  
13 explain the basis for it, you'll have to evaluate what  
14 they say and whether you believe it and what degree you  
15 want to give it any weight.

16           During the trial, I'll also -- I also  
17 anticipate that there will be testimony of witnesses  
18 that will be presented to you in what we call  
19 depositions.

20           In trials like this, it's difficult to get  
21 everyone present physically at the same time. So  
22 lawyers from each side, prior to the trial, take the  
23 depositions of witnesses.

24           In a deposition, they have a court reporter  
25 present. The witness is there and is sworn in under

1 oath just as if he or she were in open court, and the  
2 parties ask them questions through their counsel, and  
3 that process is recorded.

4 Portions of those recordings, video  
5 recordings, of the questions and answers may be played  
6 to you as part of the trial so that you can see the  
7 witness and hear the testimony even though they're not  
8 physically present in the courtroom.

9 That deposition testimony is entitled to the  
10 same consideration insofar as possible and is to be  
11 judged as to the credibility and believability and  
12 otherwise considered by you, the jury, in the same way  
13 as if the witness had been present and given the  
14 testimony from the witness stand in open court.

15 Now, ladies and gentlemen, during the trial,  
16 it's possible that the lawyers from time to time will  
17 make objections, and when they do, I will make rulings  
18 on those objections.

19 It's the duty of an attorney on each side to  
20 object when the other side offers testimony or other  
21 evidence the attorney believes is not proper under the  
22 rules or orders of the Court and the rules of evidence  
23 and procedure.

24 Upon allowing testimony or other evidence to  
25 be introduced over an objection, the Court does not,

1 unless expressly stated, indicate an opinion as to the  
2 weight or effect of such evidence. Again, determining  
3 the weight and effect of evidence is solely your  
4 responsibility as the jury.

5           You are the sole judges of the credibility of  
6 all the witnesses and the weight and the effect to be  
7 given to all of the evidence in this case.

8           I do want to compliment counsel and the  
9 parties on both sides, because through pretrial  
10 procedures that you have not been a part of, many, many  
11 documents and proposed exhibits have been gone through,  
12 taken up, ruled on by the Court, and that has saved you  
13 a lot of time, and, hopefully, that will minimize the  
14 number of objections that we hear during the trial.

15           Even so, it is possible that we will get  
16 objections during the trial, and in that case, I will  
17 rule on them.

18           So if a party shows you an exhibit -- shows  
19 you an exhibit in this case, it means that it's already  
20 been ruled on as to its admissibility by the Court, and  
21 they may ask you such questions and put it in context as  
22 they believe is proper.

23           Both sides have worked hard to streamline this  
24 process, and they're entitled to our thanks. You may  
25 not understand fully how much time they have saved you,



1 but they have saved you, with the Court's work with  
2 them, a considerable amount of time.

3           However, as I say, we may still get objections  
4 during the trial.

5           If I sustain an objection to a question  
6 addressed to a witness, then you must disregard the  
7 question entirely and draw no inference from the wording  
8 of it or speculate about what the witness would have  
9 said, if I had permitted the witness to answer the  
10 question.

11           On the other hand, if I overrule an objection,  
12 you should consider the question and the answer just as  
13 if no objection had been made.

14           You should know that the law of the United  
15 States allows a judge in my position to comment to the  
16 jury on the evidence in a case.

17           But such comments from the Court on the  
18 evidence are only an expression of the judge's opinion  
19 as to the evidence, and the jury is free to disregard  
20 such comments in their entirety, because, as I've stated  
21 before, you, the jury, are the sole judges of the facts,  
22 the credibility of the witnesses, and how much weight,  
23 if any, you want to give to their testimony.

24           However, even though I may have that right, as  
25 I've indicated to you earlier, I intend to try very hard

1 to make sure not to comment on the evidence in the case  
2 or to give you any idea about what I think of the  
3 evidence presented throughout the trial.

4 Now, in front of me our court reporter,  
5 Ms. Holmes, is taking down everything that is said in  
6 the courtroom, and it will be reduced to writing in the  
7 form of a transcript.

8 But that transcript will not be available to  
9 you at the time you retire to deliberate on your  
10 verdict. The transcript is prepared in the event there  
11 is an appeal to an appellate court after this trial is  
12 over.

13 That being the case, each of you will have to  
14 rely on your own memories of the evidence. In a moment,  
15 we're going to give each of you a juror notebook.

16 One of the things you'll find in the back of  
17 that notebook is a legal pad with blank pages on it on  
18 which you may take notes, if you choose. It's up to you  
19 to decide whether or not you want to take notes during  
20 the trial, and if you do, how detailed you want your  
21 notes to be.

22 Remember, though, if you do that, the notes  
23 are for your own personal use. You'll have to rely on  
24 your memory of the evidence, and that's why you should  
25 pay close attention to the testimony of each and every

1 witness.

2           You should not abandon your own recollection  
3 simply because someone else's notes indicate something  
4 differently. Your notes are to refresh your  
5 recollection, and that's the only reason you should be  
6 keeping them.

7           At this time, I'm going to ask our court  
8 security officer to hand out the juror notebooks to the  
9 members of the jury.

10           In these notebooks, ladies and gentlemen,  
11 you'll see that you each have a copy of the two asserted  
12 patents that we've talked about, the '228 patent and the  
13 '580 patent.

14           Also in your notebooks, you'll see something  
15 listing the claim terms. Those are the words that are  
16 found in the numbered claims at the back of the  
17 patents-in-suit that I told you about before. Along  
18 with each claim term are the definitions that the Court  
19 has given you to work with in regard to those terms.

20           Also you'll find in there witness photographs  
21 for each of the witnesses that we anticipate will  
22 testify in the case. And below their photographs are  
23 spaces where you may also take additional notes, if you  
24 choose to.

25           When you leave for the day during the trial

1 this week, be sure that you take your notebooks with you  
2 and leave them on the table in the jury room. They  
3 should either be with you in the courtroom or they  
4 should be on the table in the jury room and not anywhere  
5 else.

6           There may be times when we take a brief recess  
7 where I know that it will be short, and I will tell you  
8 that you may simply leave your notebooks in your chairs.  
9 But when you leave for the day, make sure that you carry  
10 them into the jury room and leave them on the table in  
11 the jury room.

12           We're going to have opening statements in just  
13 a few minutes, so I want to give you a brief roadmap of  
14 where the trial is going and how it's structured.  
15 You'll have plenty of time to look through those  
16 notebooks during the course of the trial.

17           After the opening statements, each side will  
18 present an opening statement. Then when both opening  
19 statements are complete, the Plaintiff, Rembrandt, will  
20 present its evidence in support of its contentions that  
21 the claims of its patents-in-suit have been and continue  
22 to be infringed by the Defendant, Samsung.

23           To prove infringement of any claim, Rembrandt  
24 must persuade you that it is more likely than not that  
25 Samsung has infringed that claim; that is, by a

1 preponderance of the evidence.

2           After Rembrandt puts on its testimony and  
3 rests, then Samsung, the Defendants, will present their  
4 evidence as to the asserted claims of the patents and  
5 their assertion that those -- that the patents-in-suit  
6 are invalid.

7           To prove invalidity of any claim, Samsung must  
8 persuade you by clear and convincing evidence that the  
9 claim is invalid. In addition to presenting evidence of  
10 invalidity, Samsung will also put on evidence responding  
11 to Rembrandt's proof of infringement and damages. Then  
12 Samsung will rest.

13           After Samsung has rested, then the Plaintiff,  
14 Rembrandt, may put on additional evidence, if they  
15 choose to, responding to Samsung's evidence that the  
16 claims of the patents are invalid or unenforceable and  
17 offer any other rebuttal evidence to the charges of  
18 infringement and damages. This is called the rebuttal  
19 case.

20           During the rebuttal evidence, the Plaintiff  
21 may respond to any evidence offered by the Defendants.

22           After all the evidence is completed -- the  
23 Plaintiff puts on its case-in-chief, the Defendants put  
24 on their case-in-chief, and then the Plaintiffs put on  
25 their rebuttal case, if they choose to.

1           When all the evidence has been presented, I'll  
2 give you final instructions on the law that applies to  
3 this case. Those final instructions are called the  
4 Court's charge to the jury.

5           The lawyers will then present their closing  
6 arguments to you. And then after that, you will retire  
7 to the jury room to deliberate and reach your verdict.

8           Also I'll repeat my earlier instruction to you  
9 not to discuss the case at all among yourselves during  
10 the trial. Only when all the evidence is complete and  
11 you retire to the jury room to deliberate and reach your  
12 verdict, only then is it proper for you to discuss the  
13 case among yourselves.

14           Also I'll remind you again, as I did before  
15 lunch, that the attorneys and the witnesses and the  
16 corporate representatives have been instructed by the  
17 Court not to talk to you.

18           So as you pass them in and around the  
19 courthouse coming and going, if they walk by you and  
20 don't speak, don't think they're rude and unfriendly.  
21 They're simply doing what I've instructed them to do.

22           All right. With those instructions, we're now  
23 going to hear the Plaintiff's opening statement followed  
24 by the Defendants' opening statement.

25           Plaintiff may now present its opening

1 statement to the jury.

2 MR. ANAIPAKOS: May I proceed, Your Honor?

3 THE COURT: You may.

4 MR. ANAIPAKOS: Thank you.

5 THE COURT: Would you like a warning on your  
6 time, Counsel?

7 MR. ANAIPAKOS: Please, Your Honor, at five  
8 minutes left.

9 THE COURT: All right. You may proceed.

10 MR. ANAIPAKOS: May it please the Court.

11 Good afternoon, everybody. My name is  
12 Demetrios Anaipakos, and together with my colleagues, we  
13 are proud to represent Rembrandt Wireless.

14 You have been asked to resolve a patent  
15 dispute between two companies. My client, Rembrandt  
16 Wireless, is the owner of two patents issued by the  
17 United States Patent and Trademark Office.

18 And the evidence we will present to you  
19 throughout this trial will show you that Samsung has  
20 infringed on those patents by selling millions and  
21 millions of products that use the inventions claimed in  
22 those patents without our permission and without paying  
23 for them. That is why we are here.

24 In this -- in this morning's opening remarks,  
25 I'm going to cover five topics with you. First, we're

1 going to review very briefly what a patent is.

2           Then we're going to talk specifically about  
3 the Rembrandt patents at issue in this case; our view of  
4 why Samsung infringes these patents; why, since Samsung  
5 attacks the patents, the patents are, in fact, valid;  
6 and then lastly, we will talk to you about the damages  
7 we believe are owed to Rembrandt.

8           Let's begin by reviewing some of what you've  
9 already learned this morning about our patents and the  
10 patent system.

11           The founding fathers of this country thought  
12 that patents were so important that they established the  
13 patent system in the Constitution itself. Article 1,  
14 Section 8 on the screen before you gives inventors the  
15 exclusive right to their discoveries.

16           The patent system has come a long way in the  
17 more than 200 years since the Constitution was signed,  
18 but one thing has remained the same all that time.  
19 Patents are a form of property. You can often think of  
20 them like a deed to a piece of property.

21           So let's take an example of a landowner who  
22 owns a piece of real property. The yellow border marks  
23 the boundaries of the property. The property owner, of  
24 course, can keep trespassers off the property.

25           And to pick up on a hypothetical Mr. Ward



1 talked about this morning, if Exxon were to drill on the  
2 landowner's property and discover oil, it would not  
3 matter that Exxon did not know it was trespassing. It  
4 still -- you would owe the landowner a royalty. Why?  
5 Because it used the landowner's property.

6 Patents work the same way. A patent owner  
7 like Rembrandt has the right to seek damages from an  
8 infringer, and we expect the Court will instruct you  
9 that an infringer does not need to know that there was a  
10 patent and certainly does not need to know that  
11 Rembrandt was the owner of the patent to be held  
12 accountable for patent infringement.

13 What matters is whether the infringer is using  
14 the patented invention without permission. If so, they  
15 infringe the patent. And here, the evidence will show  
16 that Samsung did just that.

17 We know that patents are property rights that  
18 owners can enforce. So let's start discussing the  
19 Rembrandt patents at issue in this case.

20 At the outset, I want to make something very  
21 clear. We think the evidence in this case will show  
22 that the Rembrandt patents are extraordinarily  
23 important. They contain powerful inventions in them  
24 that Samsung has put into millions and millions of  
25 Bluetooth devices, including since this lawsuit was

1 filed.

2 Every important invention has at least one  
3 thing in common, and that is a clever inventor. And  
4 this case is no different.

5 The very first witness you're going to hear  
6 from is Mr. Gordon Bremer, the inventor on these  
7 patents. Mr. Bremer is now retired and -- and living in  
8 Florida. He spent 32 years working as an engineer for  
9 an AT&T company called Paradyne that later became known  
10 as Zhone.

11 He had a very successful career there. You'll  
12 hear that he was the head of his patent committee. He  
13 has personally been awarded 100 issued and U.S. --  
14 pending U.S. patents.

15 So what was the problem that Mr. Bremer wanted  
16 to solve? He was thinking about the need of multiple  
17 electronic devices to communicate with each other. They  
18 do this through different types of modulation methods.

19 You're going to hear that term a lot in this  
20 case. And there are several different types of  
21 modulation methods.

22 For now, I want you to think of them like  
23 languages. And if you see the illustration on the  
24 screen in front of you, we've illustrated what's called  
25 a master device.

1           That's what engineers refer to as a master  
2 device, and the other devices are, unfortunately enough,  
3 referred to as slave devices. The master controls the  
4 communication between the devices.

5           And here we've shown the Chinese flag and the  
6 letters CHN to indicate that the way these devices  
7 communicate, their modulation method is in Chinese, the  
8 one exception being the TV on the left there. That one  
9 can speak in both English and Chinese.

10           So what's the net effect of this? At this  
11 time, all the devices can speak together because they  
12 all speak a common language, Chinese. But what happens  
13 when you go out and decide to buy a new device, a more  
14 powerful device, a faster device? That's when problems  
15 start.

16           The new device uses a different modulation  
17 method, a different language. So what happens now? It  
18 can no longer communicate with the older devices.

19           New devices and old devices do not use the  
20 same modulation method. They do not speak the same  
21 language. That causes large interruptions and leaves  
22 you with very unattractive options. You can either  
23 throw away your old devices or have these massive  
24 network interruptions.

25           But what you can't do is you can't have all of

1 these devices talk to each other and work seamlessly  
2 with each other. That was until Gordon Bremer came  
3 around and solved that problem.

4           So what was Mr. Bremer's solution? Here we  
5 have the old situation where all of the devices spoke  
6 the same modulation method. In Mr. Bremer's solution,  
7 different types of modulation methods, different  
8 languages, are embedded in a signal that goes from the  
9 master to the various other devices.

10           In other words, they can all speak each  
11 other's languages now. They can choose which language  
12 to speak. They can change languages on the fly. They  
13 can decide to use one language or another language,  
14 depending on the circumstances. All the devices can  
15 speak simultaneously.

16           So we've solved the problem that you'll hear  
17 about in this case called backwards compatibility,  
18 meaning that now, because they can switch languages on  
19 the fly, new devices and old devices can work in unison  
20 with each other, in harmony. There can be complete  
21 backwards compatibility.

22           So Mr. Bremer's invention is known as embedded  
23 modulation. And Mr. Ward, who now wins the award for  
24 least technical member of the team this morning -- this  
25 morning incorrectly said that Mr. Bremer had invented

1 different types of modulations. What he invented was  
2 actually embedded modulations.

3 And that invention is first contained in an  
4 application filed with the Patent and Trademark Office  
5 in 1997. You see right there, the title of the  
6 invention is Embedded Modulations.

7 The date that's highlighted is December 5th,  
8 1997. That's known as the priority date because it sets  
9 the date for Mr. Bremer's invention. So when we talk  
10 about Mr. Bremer's invention, we're talking about the  
11 invention on December 5th of 1997.

12 Mr. Bremer's invention was awarded a patent by  
13 the Patent and Trademark Office. So let's take a quick  
14 look at the process that Mr. Bremer and other inventors  
15 have to go through.

16 As you heard on the video this morning and  
17 again from the Court this afternoon, one of the first  
18 things that happens is someone -- a trained  
19 professional, known as a Patent Examiner, is assigned to  
20 the application.

21 And as the name implies, the job of the Patent  
22 Examiner is to examine the application. Lots of  
23 applications get rejected. The process is not quick or  
24 easy.

25 You'll hear from Mr. Bremer, for example, that

1 some of his patent applications were examined for four  
2 years, five years, longer.

3 So if and when the good news arrives that a  
4 patent has issued, what does it look like? You saw the  
5 ribbon copy this morning, and on the screen before you  
6 now are copies of the two patents that are being  
7 asserted in this case. Again, we refer to them by the  
8 last three numbers: The '580 patent and the '228  
9 patent.

10 I'm going to take you on a quick tour of the  
11 information you will see in these patents, although they  
12 are in your juror notebooks, and you'll be able to look  
13 in them in as much detail as you'd like.

14 They're structured the same way, so for the  
15 purposes of our tour, we will look at the '580 patent.  
16 The first page lists the title of the patent, the  
17 inventor, and the priority date that we discussed a  
18 moment ago.

19 And importantly, ladies and gentlemen, Samsung  
20 is not contesting the priority date. Both of the  
21 patents before you, the '580 and the '228, have the same  
22 priority date.

23 And why is that date important? Well, for one  
24 reason, it sets the date by which the Examiner will  
25 consider what's been called prior art.

1           And as you see on the screen in front of you,  
2 the references cited section starts to list the prior  
3 art that the Examiner considered. That starts on the  
4 first page here, but in this instance, it was  
5 extraordinarily extensive. It goes on for several pages  
6 in the patent.

7           What is prior art? It includes things  
8 disclosed to the public before the priority date; hence,  
9 the name prior art, things like patents and other  
10 scientific articles.

11           Here, the -- the search was extensive. I've  
12 counted all of the prior art references in these  
13 patents. There are 260 of them.

14           And what was the point of the prior art  
15 search? From our perspective, it was to make sure that  
16 the patent was valid and that, in fact, no one had  
17 invented Mr. Bremer's embedded modulation technique  
18 before he did.

19           After the prior art listing, there are some  
20 figures and drawings that I have not included, but  
21 they're in your juror notebook.

22           And then we get to the part of the patent  
23 known as the specification. The specification provides  
24 a written description of the invention, the scope,  
25 background, the summary of the invention, and some of

1 the ways that it can be implemented.

2 After the specification, you get to the  
3 numbered claims. Those ought to jump out at you --  
4 the -- the numbered paragraphs. Those are called the  
5 claims. These are very important because they define  
6 the particular invention.

7 We're going to come back and look at the  
8 details of the claim in a minute, but for now, let's  
9 consider how these patents we're looking at became  
10 Rembrandt's property in the first place.

11 Rembrandt bought these patents in 2007 from a  
12 company called Zhone, and the first page of the patent  
13 sale agreement, which is in evidence, is on the screen  
14 in front of you. Again, you'll be able to look at this  
15 in as much detail as you want.

16 Rembrandt paid \$5 million to Zhone under this  
17 agreement. For what? For some 74 patents and patent  
18 applications, and those patent applications included the  
19 patents that eventually issued here, the -- the '580 and  
20 the '226 (sic) patents.

21 So Rembrandt made the business decision to  
22 invest its money to buy these patents.

23 So exactly what kind of business is Rembrandt  
24 in? Who is Rembrandt? Well, we're joined at counsel  
25 table by Dr. Paul Schneck. He was the co-founder and is



1 the chairman of Rembrandt.

2           You'll learn that Rembrandt is a team of  
3 people with a lot of expertise in intellectual property,  
4 scientists, engineers, finance people, lawyers. They  
5 invest in inventions. They put their own money at risk  
6 looking for patents and other intellectual property  
7 opportunities.

8           They run a business, and it should be no  
9 surprise that they try to make money on their  
10 investments. They seek patents that are valuable or  
11 might become valuable in the future.

12           They, in effect, look for a Rembrandt in the  
13 attic. And some of you may be familiar with that book,  
14 but the idea is that some folks have Rembrandts in their  
15 attic, and they don't know it. So the premise of -- of  
16 Rembrandt is that they look for value where others do  
17 not see it.

18           And how do they do that? Well, they have a  
19 process at Rembrandt, and you're going to see these  
20 documents as well. These are taken from the very early  
21 days of Rembrandt.

22           And they have a catch phrase that they use to  
23 describe their process. They call it the, quote,  
24 unquote, secret sauce. And you can see there that it  
25 walks you through how they operate.

1 I want to talk to you about a specific part of  
2 this schematic. If you look, there's a diamond box that  
3 says: Need new claims, and a rectangular box needs --  
4 next to it that says: Apply for new claims.

5 What exactly is that referencing? That's  
6 describing the process of applying for new claims before  
7 the Patent Office. That happens all the time in the  
8 patent world. Rembrandt does it. Samsung does it.  
9 Inventors do it every day. That process is called a  
10 continuation.

11 And what is a continuation? It's a new patent  
12 application, based on an earlier disclosure. Here is  
13 the December 1997 one we saw earlier.

14 So you see, sometimes an invention is entitled  
15 to more than one patent, and that's why -- why there are  
16 continuations. Both of the patents here are  
17 continuations.

18 So let's think back to that example of the  
19 real property I showed you with the yellow border. A  
20 continuation would be like if you went to a previously  
21 unfenced part of that property, and you put up a fence  
22 around it.

23 It's your property. You didn't have a fence  
24 there before, but now you do. Now you've blocked off  
25 that piece of property. That's a lot like a

1 continuation.

2 Now that we've reviewed briefly two --  
3 Rembrandt's two patents, let's discuss how we believe  
4 Samsung infringes them.

5 First, we'll talk about the accused products.  
6 And His Honor defined them earlier. It's all of the  
7 Samsung Bluetooth EDR devices.

8 And what does EDR mean? You see on the screen  
9 in front of you underlined in red, 2.0+EDR. EDR stands  
10 for enhanced data rates.

11 And we're going to get into the details of  
12 that, but the most important thing that I want you to  
13 remember for now about enhanced data rates is this:  
14 Mr. Bremer's invention is at the heart of it. Without  
15 embedded modulation, enhanced data rates does not work.

16 What we're looking at is the official  
17 specification for Bluetooth 2.0+EDR. That's issued by  
18 an entity called the Bluetooth SIG, special interest  
19 group. And they get to set the rules for anyone who  
20 wants to label their products Bluetooth, like Samsung  
21 does.

22 So if you are proud of the fact that you have  
23 a Bluetooth product and you think consumers like it, you  
24 can actually put that label on your products, like  
25 Samsung does. You're going to see evidence that even on

1 their boxes, they put Bluetooth labels next to other  
2 important features of -- to consumers.

3 So the evidence will be that Samsung cannot  
4 make a Bluetooth EDR device without infringing  
5 Mr. Bremer's patent. Why? Because embedded modulation  
6 is the heart of enhanced data rate.

7 The patents in this case have many claims in  
8 them, but there are only three that are being asserted  
9 here. In the '580 patent, those are Claims 2 and 59;  
10 and in the '228 patent, it's Claim 21.

11 At the end of the case, we expect the Judge  
12 will ask you to determine whether Samsung has violated  
13 or infringed these specific claims, and we believe the  
14 answer to that question is yes.

15 Let's take a look at one of these claims that  
16 we can see kind of what they look like. This is  
17 Claim 59 of the '580 patent. It is what's called a  
18 dependent claim.

19 In other words, it references another claim  
20 here, Claim 58. And that's why I have the language from  
21 both on the screen in front of you.

22 Now, when you look at patent claims, they're  
23 really an English teacher's worst nightmare. It's like  
24 a run-on sentence that never ends. And so rather than  
25 try now to go through every one of these limitations,

1 I'm going to focus where I believe the dispute will be.

2 Trust me, we're going to walk through every  
3 one of these limitations as we go through the trial and  
4 show you how Samsung, in fact -- in fact, practices  
5 every piece of -- of this claim.

6 But for now, all of this dispute, I believe,  
7 at the end of the day is going to come down to one word,  
8 and that word is the word "indicate." And the question  
9 is going to be whether Samsung's Bluetooth EDR devices  
10 meet that term in this claim, "indicate."

11 So how are we going to resolve that dispute?  
12 Well, in part, you're going to hear from expert  
13 witnesses who will show you why this "indicate" issue is  
14 really not an issue at all.

15 One of the people you're going to hear from  
16 likely today is Dr. Bob Morrow. Dr. Morrow is one of  
17 the world's premiere experts on Bluetooth. He literally  
18 wrote the book on Bluetooth.

19 He's going to walk you through the claims and  
20 the technology, and ultimately, he's going to tell you  
21 that the way these patents work meets that limitation,  
22 the indicates limitation in the patents.

23 You're also going to hear from another expert,  
24 this one Dr. Chris Jones. Dr. Jones has reviewed  
25 certain very confidential source code.

1           What is source code? It's software. It's  
2 instructions that are used, in this case, to create the  
3 microchips that go into Samsung Bluetooth devices. And  
4 he's going to testify the same way, that after looking  
5 at this source code and what the microchips do, that  
6 claim limitation, that "indicate" language is satisfied.

7           Now, if you look at the quote attributed to  
8 Dr. Jones, there are some terms that we have not  
9 discussed today.

10           For example, there's the term packet header,  
11 and then there's another term, payload. So to  
12 illustrate what we're talking about, let's -- let's  
13 consider a very simple example.

14           The two boxes on the screen in front of you  
15 are what's called a packet. The blue box on the left is  
16 the header, what I'm calling here the first sequence.  
17 And the red box on the right is the payload, or what  
18 we're calling here the second sequence.

19           And what's all of this "indicate" debate  
20 about. Well, the key point here is that the first  
21 sequence on the left is going to indicate to the second  
22 sequence on the right what type of modulation we're  
23 using, what language are we going to speak, English or  
24 Chinese? And how does this work in this example?

25           Well, the first thing that happens is the

1 first sequence is going to communicate this using  
2 English letters. No matter whether we're going to  
3 modulate in English or Chinese, whether we're going to  
4 speak English or Chinese, we're going to communicate  
5 that in English letters. We're going to indicate that.  
6 And so here we indicate that through ENG for English.

7 And so if you look to the second sequence, the  
8 data is, in fact, in English. What happens if we're  
9 going to switch and we're going to modulate in Chinese?  
10 Well, remember, it's always going to be transmitted in  
11 English letters.

12 So CHN indicates what? We're going to  
13 modulate in Chinese. And that's what happens in the  
14 second sequence.

15 Now, these concepts are probably still a  
16 little fuzzy, and they're going to be a little fuzzy for  
17 a while, but it will get better as we walk through them  
18 and you start to hear from the experts and look at  
19 exactly what these patent claims talk about.

20 But for now, when we think about this  
21 "indicate" issue, I want you to consider a very simple  
22 example. His Honor told us earlier that when claims are  
23 not construed and they're not in your binder, and  
24 "indicate" is one of those, that we're going to use  
25 plain and ordinary meaning. And when you think about

1 the plain and ordinary meaning of "indicate," I think  
2 it's illustrative.

3 So, for example, what does this (indicating)  
4 indicate?

5 I have a question. I don't have to spell it  
6 out for you.

7 What does this indicate (indicating)?

8 Sh-h-h, please be quiet. Again, I don't have  
9 to spell it out for you.

10 When I was driving to the courthouse today and  
11 I turned on my signal indicator in my car and the right  
12 light started blinking in the back of my car, what did  
13 that indicate?

14 I'm going to turn right. Again, I didn't have  
15 to spell it out for you.

16 But we believe that that's actually going to  
17 be Samsung's interpretation of "indicate." They're  
18 going to tell you, I believe, that "indicate" means you  
19 have to spell it out, and you have to be a hundred  
20 percent right. You can't be off by even one letter.

21 So we'll see if at the end of the day that  
22 makes sense in the way we experience the word  
23 "indicate."

24 Let's talk briefly about the validity of the  
25 patents. Samsung is arguing that Mr. Bremer should have



1 never been awarded these patents in the first place, and  
2 they're going to try to invalidate the patents.

3 The Court has instructed you already that  
4 patents are presumed valid.

5 And what does that mean in this case? That  
6 means that there's a burden to have to overcome, because  
7 the Patent and Trademark Office has already examined the  
8 patents and determined that they were justified and  
9 proper inventions. And what does that burden look like?

10 His Honor did a better job than I could at  
11 describing the differences between the burdens of proof.  
12 Suffice it to say, I'll just review it now.

13 There are two burdens of proof in this case.  
14 There's the burden on Rembrandt, which we gladly accept,  
15 to show infringement of the patents. That burden is  
16 done by a preponderance of the evidence. Remember, the  
17 slightest tipping of the scale in one direction.

18 Samsung's burden, when trying to take away  
19 Mr. Bremer's patents and hold them invalid, is through  
20 clear and convincing evidence. It's a heavier burden.  
21 And we don't think they come close to meeting it here.

22 The prior art that they're going to try to  
23 rely on to invalidate the patents is a patent known as  
24 Boer. We don't believe that's going to invalidate  
25 Mr. Bremer's patents, because, remember, it's going to

1 have to disclose to you every element that Mr. Bremer  
2 invented.

3 It doesn't disclose the master slave concept  
4 that I discussed with you earlier, and it doesn't even  
5 disclose different types of modulation methods. So it's  
6 not going to get there.

7 Finally, let's discuss the topic of damages.  
8 If you conclude that Samsung infringes Rembrandt's  
9 patents, then we expect that the Court will instruct you  
10 that the law requires that Rembrandt be compensated for  
11 that patent infringement.

12 You heard this morning -- or this afternoon,  
13 rather, that those damages are in the form of a  
14 reasonable royalty under the law in this country.

15 And what's a reasonable royalty?

16 Well, one way to think about it is it's kind  
17 of like rent being paid to a landlord, because,  
18 remember, patents are kind of like real property. So  
19 the owner of a patent is entitled to a reasonable  
20 royalty from someone who uses the invention without  
21 permission.

22 Now, the calculation of a reasonable royalty  
23 is also governed by the law in this country, and it asks  
24 that we imagine a hypothetical negotiation. And on the  
25 screen in front of us, we're here in 2015 trying this

1 case. The lawsuit was filed in 2013.

2 But everyone agrees -- Samsung agrees and we  
3 agree -- that the date of the hypothetical negotiation  
4 where you would calculate this reasonable royalty is  
5 back in 2011.

6 Why? That's the date that the first patent  
7 issued, the '580 patent.

8 THE COURT: You have five minutes remaining,  
9 Counsel.

10 MR. ANAIPAKOS: Thank you, Your Honor.

11 So if you imagine the hypothetical negotiation  
12 table, what's -- who's at the table?

13 Well, at the one side, you have Rembrandt. On  
14 the other side, you have representations of Samsung.  
15 And we're back in September of 2011, the date of the  
16 patent being issued. But there are two important things  
17 that the law says about this hypothetical negotiation.

18 Number one, the parties at the table agree  
19 that the patents are valid; and number two, that Samsung  
20 is going to infringe the patents. They agree on both of  
21 those things.

22 So the only question is the price. When  
23 considering what the appropriate price is, one of the  
24 things that you should do is consider the benefits of  
25 the invention; here the benefits of the enhanced data

1 rate, which cannot work -- again, cannot work without  
2 the embedded modulation that Gordon Bremer developed.

3 Well, what are the benefits of EDR? The  
4 documents on the screen are taken from Samsung's own  
5 files.

6 First, backwards-compatibility. That's the  
7 problem we discussed earlier, that without this embedded  
8 modulation, when you bring in a new device and that old  
9 device doesn't use the same kind of modulation, they're  
10 antiquated; you've got to throw them out. Mr. Bremer  
11 solved that problem.

12 Second, improved battery life. Enhanced data  
13 rate lets you send a lot more data faster to the  
14 batteries don't have to work as long. You save power,  
15 and it prolongs battery life.

16 When you're talking about something like a  
17 phone, that matters to people like Samsung, again, taken  
18 from Samsung's own documents, longer battery life for  
19 existing Bluetooth applications.

20 And then we found this study in Samsung's file  
21 that talked about battery life management being  
22 important to users of the phone.

23 Makes perfect sense. People use their phones  
24 now for all kinds of applications. Burns up battery.  
25 If you have something like EDR that can prolong battery

1 life, it's very valuable for a company like Samsung.

2 And then finally, improved performance, a lot  
3 of the things we've been talking about; faster, can move  
4 more data.

5 The expert who will talk to you about the  
6 reasonable royalty in this case is Roy Weinstein. He  
7 has a lot of experience and impeccable credentials, and  
8 he's done a lot of work that he will walk you through to  
9 talk about what the reasonable royalty should be.

10 At the end of the day, his calculation will be  
11 that for every Bluetooth EDR device, the reasonable  
12 royalty is in a range of 5 cents to 11 cents per unit.  
13 That starts in September of 2011.

14 And when you look at the millions of units  
15 that Samsung has sold, that number turns out to be  
16 14-and-a-half million to \$31.9 million.

17 So we expect, at the end of this case, to ask  
18 you to award a reasonable royalty to Rembrandt of  
19 \$31.9 million. And we don't ask that lightly. We do so  
20 because we think the evidence is going to justify it at  
21 the end of the case.

22 And as I'm finishing, it strikes me, one more  
23 example of "indicate." My phone tells me that I spent  
24 29 minutes talking. I had 30. That tells me, without  
25 spelling it out, that I should sit down.

1           And so with that, I thank you on behalf of the  
2 people at Rembrandt for your service and your time. We  
3 look forward to presenting our case to you.

4           THE COURT: All right. The Defendants may now  
5 present their opening statement to the jury.

6           MR. SHERWOOD: May I proceed, Your Honor?

7           THE COURT: You may.

8           MR. SHERWOOD: Good afternoon, ladies and  
9 gentlemen. My name is Jeff Sherwood, and I'm one of the  
10 lawyers representing Samsung in this case.

11           I want to thank you on behalf of Samsung for  
12 your service on this jury. This is my opportunity to  
13 talk to you now at the beginning of the trial about the  
14 evidence.

15           Because Rembrandt presents its evidence first,  
16 I must ask you to keep an open mind and give Samsung an  
17 equal opportunity to present its evidence. That is why  
18 we specifically asked about keeping an open mind during  
19 voir dire. It's very important to Samsung.

20           You just heard an explanation as to why  
21 Samsung infringes these patents and owes Rembrandt  
22 money. Samsung does not infringe these patents.

23           That is because every one of claims that's at  
24 issue here requires that specific information be placed  
25 in specific part of the messages that go between

1 Bluetooth devices. The Bluetooth chips in Samsung's  
2 products do not do that.

3 May I have the ELMO, please?

4 Here is one of those messages. And what you  
5 will learn from the evidence is that this Bluetooth  
6 message does not contain the information that is  
7 required by the Rembrandt patents for the simple reason  
8 that when the Bluetooth Group designed this message for  
9 a version of Bluetooth called 1.2 that you didn't hear  
10 about during Rembrandt's opening, there was no need for  
11 any information about a change in modulation method,  
12 because there was only one modulation method.

13 This message has never changed, even though  
14 EDR did introduce a second modulation method that was  
15 optional. It has stayed the same from the beginning of  
16 Bluetooth until today. And, therefore, it does not meet  
17 the requirement of indicating any change in modulation.

18 I want to tell you two other things that are  
19 important about keeping an open mind at the beginning of  
20 this trial.

21 First, Mr. Bremer was not involved --  
22 Rembrandt's inventor was not involved in developing any  
23 part of Bluetooth, including EDR.

24 In fact, he testified he'd never even heard of  
25 Bluetooth until 2007, long after the Bluetooth Group had

1 published the 2.0 update with EDR. By the time that Mr.  
2 Bremer first heard of Bluetooth, they'd -- Bluetooth had  
3 actually already updated that standard with 2.1.

4 Similarly, the evidence -- and Mr. Ward, by  
5 the way, did misspeak when he said that Mr. Bremer did  
6 invent two modulation methods. He also said another  
7 part of the invention that was important was longer  
8 battery life.

9 The evidence will show that these patents do  
10 not discuss battery life at all. In fact, they don't  
11 even talk about mobile devices, which are the things  
12 that need batteries.

13 Bluetooth -- the core feature of Bluetooth,  
14 which is what is in all of Samsung's products, is the  
15 ability for all of those devices to communicate with  
16 each other. EDR is a small feature in Bluetooth.

17 There are many other more important features,  
18 much more important features besides EDR, such as new  
19 data transmission, energy savings, better communication  
20 connections between the devices and so forth.

21 So what is Bluetooth? Bluetooth came from an  
22 industry group called the Bluetooth Special Interest  
23 Group, and I'm going to call it the Bluetooth Group.  
24 And it created a standard in the late '90s.

25 Let me have the first slide, please. Can you



1 switch back over?

2 This is a timeline I'm going to take you  
3 through. Created in the late '90s. Samsung's products  
4 comply with the Bluetooth standard, which, as I've  
5 already told you, is different from what is required in  
6 these patents.

7 You heard a little bit about Rembrandt.  
8 Rembrandt has a different business model than Samsung.  
9 As you saw, according to its own documents, Rembrandt  
10 searches for and buys patent rights that it then tries  
11 to expand. It markets this approach to patent owners as  
12 its secret sauce.

13 In this case, you're going to hear that  
14 Rembrandt bought Mr. Bremer's patent rights and saw an  
15 opportunity to take those rights and use its secret  
16 sauce to expand them. This was what Mr. Ward was  
17 talking about when he asked if anybody would object to  
18 that procedure during voir dire.

19 So now I want to take you through this  
20 timeline, and I want to show you there are two separate  
21 stories here.

22 On the top of the timeline, we see what's  
23 going on with respect to Rembrandt's patent claims and  
24 Mr. Bremer's patent rights.

25 And below, you will see what happened with

1 respect to the Bluetooth Group. The important point  
2 here is that until this lawsuit was filed, these two  
3 stories had absolutely nothing to do with each other.

4 So starting on the bottom, first, you can see  
5 that in the late 1990s, the Bluetooth Group was formed.

6 By 2002, the Bluetooth Group was working on an  
7 update for its existing wireless standard, which became  
8 2.0. The Bluetooth Group wanted to improve that  
9 original standard, but unlike Mr. Bremer, it wanted to  
10 ensure that all Bluetooth devices would remain  
11 compatible, able to communicate with each other.

12 In 2004, the Bluetooth Group published that  
13 update called Bluetooth 2.0. Bluetooth 2.0, as I've  
14 said, included an option feature called EDR that could  
15 increase data transmission speeds between Bluetooth  
16 devices. That's a tongue-twister, Bluetooth 2.0.

17 This EDR feature is what Rembrandt believes  
18 infringes their patents. Importantly, EDR -- 2.0,  
19 rather, preserved all Bluetooth devices' ability to  
20 communicate with each other.

21 Since 2004, we have -- the next couple of  
22 entries, please. Yeah.

23 There have been additional updates: 3.0, 4.0,  
24 and 4.1 most recently.

25 The next slide, please.

1           Here is an illustration of all the features of  
2 Bluetooth as they have developed over time. And, again,  
3 I remind you, the really core feature, as you'll learn  
4 from the evidence, is the one where the devices are able  
5 to actually communicate with each other.

6           That is not what's at issue in this case. EDR  
7 is just one of the features, one of the many features in  
8 Bluetooth.

9           So going back to the timeline now, you start  
10 with Mr. -- Mr. Bremer telling the Patent Office he had  
11 an invention. And his invention arose in the context of  
12 devices on a network that could not communicate with  
13 each other.

14           Mr. Bremer was looking for a way to have those  
15 devices communicate to operate on the same network  
16 without having to replace them. He called those devices  
17 incompatible.

18           The next entry on our timeline is 2007.

19           Let me go on to 2007. I guess I'm talking a  
20 little bit ahead of you.

21           And in 2007, as you heard, Rembrandt bought  
22 the rights to Mr. Bremer's 1997 filing.

23           And by the way, this was not a Rembrandt in  
24 the attic upon closer inspection. It's a Rembrandt that  
25 has been created. It's an attempt to make a Rembrandt

1 out of something that is not a Rembrandt to use Mr.  
2 Anaipakos's analogy.

3           Anyway, after buying these patent rights,  
4 Rembrandt went to work. In 2009, two years after buying  
5 them, Rembrandt applied for new patent claims. The new  
6 claims are the secret sauce that you already heard about  
7 that Rembrandt planned to use in this case.

8           In its 2009 application, Rembrandt even  
9 changed Mr. Bremer's original words of tributary  
10 transceiver to slave, matching the earlier Bluetooth 2.0  
11 standard.

12           Two years later, as you can see on our  
13 timeline, the Patent Office issued the '580 patent that  
14 Rembrandt sued on in this court in 2013.

15           These two stories show different problems and  
16 different solutions. The difference is important,  
17 because it means there's no infringement here and no  
18 obligation to pay Rembrandt. The evidence will show  
19 that the facts, a healthy sense of fairness, and the law  
20 all indicate that these claims must fail.

21           Now, as you probably knew before you came  
22 here, Bluetooth is a wireless technology that allows  
23 different devices to communicate with each other.

24           It was always meant to be a low-cost  
25 technology, because all it was doing was replacing the

1 cheap wires, low-cost wires, that go between, for  
2 example, a computer and a keyboard. It's all done  
3 through the use of a Bluetooth chip that is in all of  
4 Samsung's products.

5 At the -- Bluetooth has no incompatibility  
6 issue like Mr. Bremer described. That has been the  
7 hallmark of Bluetooth all along, to make sure that all  
8 devices could always communicate.

9 At the risk of revealing my age, you may  
10 remember the battle over video cassette formats, VHS  
11 versus Sony. You couldn't play a Betamax tape in a VHS  
12 player and vice versa, because there were competing  
13 standards and not a universal one.

14 And that was the problem. But it wasn't an  
15 issue for Bluetooth, because in the late '90s, the  
16 company, Ericsson, developed Bluetooth and named it  
17 after the Danish king Bluetooth and donated it to the  
18 public. The donation avoided the VHS/Betamax problem.

19 A small group of electronics companies then  
20 formed the Bluetooth Group to create a common standard.  
21 Thousands of companies, including Samsung and its  
22 competitors like Apple and Motorola, joined the  
23 organization that now has 24,000 members.

24 It's remarkable that all these companies came  
25 together and contributed their very substantial

1 expertise to Bluetooth.

2 And money never got in their way, because  
3 while the Bluetooth Group does charge a fee for products  
4 to be certified, there is no fee to use it, and the  
5 members exchange their patents -- their Bluetooth  
6 patents for each other's use without charging a fee,  
7 including Samsung.

8 It's so big I can hardly handle it. This is  
9 the Bluetooth 2.0 standard. The evidence will show it's  
10 over 1,200 pages long. EDR is a very small part of this  
11 standard. It's not at the heart of Bluetooth.

12 Now, rather than use its R&D facilities in  
13 Korea and Texas and elsewhere in the world, Samsung  
14 actually buys Bluetooth chips from one of a few  
15 companies who specialize in making these chips.

16 One of those companies is Broadcom. Broadcom  
17 is a major supplier of wireless chips to Samsung.

18 Samsung is a Defendant in this case because it  
19 puts Broadcom and other company's chips in its products.  
20 What's really accused here, ladies and gentlemen -- and  
21 you saw that in the slides that Mr. Anaipakos showed  
22 us -- is Bluetooth itself, a technology that's used by  
23 thousands of companies to create seamless communication  
24 between their devices.

25 So at the beginning of my opening, I told you

1 that the Bluetooth data messages in Samsung's products  
2 do not have the information that Rembrandt's patent  
3 claims require.

4 Rembrandt argues that that information is  
5 there, if it helps to determine a change is coming. But  
6 the problem here is that the patent language requires  
7 that it must indicate that there is a change.

8 Mr. Anaipakos told you that the whole dispute  
9 resolved around one word, "indicate." I'll submit to  
10 you that there's more language in the claim than that,  
11 and we have to look at that in the context of all of  
12 that language, not just isolate the one word.

13 And when you look at all of that language, you  
14 see that the Bluetooth message does not indicate, like  
15 his turn signal does, whether you're turning right or  
16 not.

17 As I said in Bluetooth 1.2, Bluetooth devices  
18 could only communicate using one modulation method or  
19 one language.

20 And just to explain what that means, a  
21 modulation method uses radio waves to send information  
22 in packets between devices. Packets are small parts of  
23 a larger message. You can think of a packet as a  
24 postcard.

25 In this slide -- can we have the next slide,

1 please?

2           In this slide, the simulator is quite  
3 apparent. On the right of the postcard is what we're  
4 referring to as a header, and on the left is the payload  
5 of the data message.

6           When we reverse them, just for illustration  
7 purposes, we can now line up the header in the postcard  
8 with the header in the Bluetooth data message.

9           Packets come in a stream. You can think of it  
10 as a long string of postcards that tell a story when  
11 they're all assembled. And to be understood, all those  
12 packets have to have the same format.

13           In Bluetooth 1.2 and all prior versions, the  
14 devices could only use the basic rate modulation method.  
15 There was no choice. There was no alternative. As a  
16 result, the part of the packet in the header never  
17 indicated a change in modulation method because there  
18 was no change to indicate.

19           As I told you before -- and if I could have  
20 the ELMO again, please.

21           Here is -- there is the 1.2 message. And --  
22 and you can see, ladies and gentlemen, up at the top,  
23 that's 1.2.

24           Now, if we take the 2.0 -- take the 2.0 header  
25 and we put this on top, and let me just show you 2.0.



1 Now let's compare them. You can see they are the same.  
2 There's no difference between them.

3 In 1.2, there was no change in modulation  
4 method. When an optional method was added in 2.0, the  
5 header didn't change. It stayed the same, as I said.  
6 As a result, the header does not indicate a change.

7 Simple logic tells us, because it is the same  
8 as the 1.2 header, the 2.0 header also does not indicate  
9 a change.

10 This is very important because every one of  
11 Rembrandt's patent claims requires that that header  
12 indicate a change in the modulation method, and none of  
13 Samsung products using the Bluetooth 2.0 and later  
14 versions of chips, none of them do it.

15 Mr. Anaipakos said the concepts here are  
16 fuzzy. Well, this is not the fuzzy concept, ladies and  
17 gentlemen. Every one of these patent claims requires  
18 this header to tell you whether the car's turning left  
19 or not. And that header doesn't do it. And that means  
20 there's no infringement in this case.

21 I know this is technical. You'll hear more  
22 testimony about it during the trial. When you listen to  
23 that evidence, remember, Rembrandt has the burden of  
24 proof on this issue.

25 And so when you get ready to decide this

1 issue, if Rembrandt has not proved more likely than not  
2 that Bluetooth is literally the same, then there is no  
3 infringement, and there can be no liability.

4 Now, one other thing I want to mention to you,  
5 with respect to infringement, I suspect Judge Gilstrap  
6 will instruct you, after the evidence is finished, that  
7 Rembrandt can only meet its burden of proof on literal  
8 infringement by showing that every requirement is  
9 actually met.

10 In fact, he's already told you that. In other  
11 words, close enough is not going to satisfy their burden  
12 of proof. If Rembrandt doesn't satisfy that burden of  
13 proof that the header, the only one Bluetooth has ever  
14 used, shows a change in modulation method, then your  
15 verdict must be for Samsung.

16 May I have the slides again, please?

17 It's like a spelling bee. You cannot get any  
18 letter wrong and still win. And that is exactly what is  
19 at issue in this case.

20 Now, let me turn to a second issue, whether  
21 these three patent claims are valid. In deciding this  
22 issue, please understand your decision in this case will  
23 only affect the three claims at issue.

24 Rembrandt has many other claims in these two  
25 patents, as you've heard, and your decision will not

1 affect any of them. You might ask yourself why you're  
2 being asked to decide this issue.

3 Judge Gilstrap has already told you that the  
4 way that our legal system is designed, it is ultimately  
5 your responsibility to make the determination with  
6 respect to validity. And Samsung has the right to test  
7 all aspects of the claims that have been made against it  
8 here in this case.

9 If you as jurors just assumed that these  
10 claims were valid simply because the Patent Office had  
11 issued them, then the system wouldn't work as it's  
12 designed to work.

13 So for all these reasons, you must fully and  
14 carefully consider the issue of patent validity. You  
15 will get instructions on the law of validity.

16 And, you know, there would be no need for  
17 those instructions and there'd be no need for evidence  
18 on validity if your role was simply to adopt the Patent  
19 Office's prior decision.

20 There are two validity issues at issue in this  
21 case, and you've heard Judge Gilstrap introduce both of  
22 them: Written description and obviousness.

23 The first issue is whether the patents fully  
24 describe the invention in Rembrandt's three patent  
25 claims, as Rembrandt has -- I'm sorry; I misstated

1 that -- whether the patents fully describe the  
2 invention, as Rembrandt has asserted them in these three  
3 patent claims; and second, whether the invention in  
4 these three patent claims is obvious.

5           You're asked to decide these issues because if  
6 that written description is missing or is incomplete or  
7 the invention is obvious, then the patent claims here  
8 are not valid.

9           So turning first to the written description  
10 issue -- if we could have the next slide -- I told you  
11 Mr. Bremer submitted his invention to the Patent Office  
12 in 1997 and that by 2002, the Bluetooth Group was  
13 already working on the 2.0 update.

14           In 2003 -- next -- Mr. Bremer submitted new  
15 information to the Patent Office for which he wanted  
16 additional patent protection.

17           And in this, he submitted five new paragraphs  
18 and a new drawing that actually describes what Rembrandt  
19 is accusing here. But as a result of that, the date for  
20 that part of the invention moved from 1997 to 2003.

21           The next thing that happened, as you've  
22 already heard, is Rembrandt bought the Bremer patent  
23 rights four years later, in 2007.

24           Two years after that, in 2009, Rembrandt  
25 applied for new claims based in part on the information

1 that Mr. Bremer had given to the Patent Office back in  
2 2003.

3 On July 22nd, 2011, the Patent Office told  
4 Rembrandt that it would allow the new claims. But the  
5 evidence will show that those claims only gave Rembrandt  
6 rights dating back to 2003.

7 So before the claims actually issued,  
8 Rembrandt made another filing, which was the last one  
9 you see over on the right. And in that filing,  
10 Rembrandt deleted the information from the 2003  
11 submission.

12 Next slide, please.

13 Here is what Rembrandt submitted to the Patent  
14 Office. And in it, it said that it was deleting that  
15 2003 disclosure because it thought that the descriptive  
16 subject matter that would remain would be in harmony  
17 with the claims.

18 In fact, the evidence will show the deletion  
19 had exactly the opposite effect. It created a  
20 disconnect between the inventor's description of the  
21 invention and the patent claims, because after that  
22 deletion, the scope of the claims, as they've asserted  
23 here, was no longer supported by Mr. Bremer's 1997  
24 description of the invention.

25 With respect to obviousness, let me start with

1 this simple example. Suppose you made pens and pencils.  
2 Lead pencils were well known in your industry for  
3 purposes of writing in a non-permanent manner. Erasers  
4 were also well known for removing lead pencil writing.

5 As a skilled person in the field, you would  
6 know -- it would be obvious to you to combine these two  
7 well-known things into one product. And the same logic  
8 is why the patent claims here in this case are obvious.

9 And here's why: In 1996, before Mr. Bremer's  
10 first patent filing, the evidence will show that a  
11 company called Lucent had already submitted a patent  
12 application to the Patent Office.

13 Your Honor, how much time do I have left?

14 THE COURT: You have about six minutes.

15 MR. SHERWOOD: Thank you, Your Honor.

16 In fact, Mr. Bremer's company, Paradyne, was a  
17 part of Lucent. Samsung will show that the Lucent  
18 patent, filed a year earlier, made the Rembrandt patent  
19 claims at issue here obvious, because the Lucent patent,  
20 taken with other public documents, already described all  
21 elements of Rembrandt's claims, and it was obvious to  
22 combine all of those elements.

23 Briefly -- and I'm not going to go into a lot  
24 of detail here -- the Lucent patent described a network  
25 with devices or tributaries, as Mr. Bremer originally

1 called them, operating at multiple modulation methods  
2 and using different speeds, just like Mr. Bremer's later  
3 patent.

4 And just like Mr. Bremer's patent, except a  
5 year earlier, this Lucent system included information in  
6 the header that actually did show a change in the  
7 modulation method.

8 And by the way, unlike Mr. Bremer's patents at  
9 issue here, Lucent did, in fact, invent new modulation  
10 methods.

11 Here is the Lucent header on your screen, and  
12 these fields that are in yellow, signal and service,  
13 indicate -- they tell you what the upcoming modulation  
14 method is.

15 Now, you heard reference also to something  
16 called a master/slave network, which is what Rembrandt  
17 claimed in these two patents. Let me show you Figure 1  
18 from the Lucent patent.

19 Next slide, please.

20 On the left is the Lucent patent disclosure,  
21 which I told you came a year earlier. And on the right  
22 is the Bremer '580 disclosure, which you heard about --

23 THE COURT: You now have five minutes.

24 MR. SHERWOOD: Thank you, Your Honor.

25 In both documents, there is a controlling

1 device. It is colored in green on both of these  
2 drawings, so you can see that -- that they both have  
3 that.

4 Both patents also have tributaries or slaves,  
5 and those are colored in -- I guess that's some sort of  
6 periwinkle/blue-type color. These are the same features  
7 here. These green and blue or periwinkle features of a  
8 master/slave network.

9 But even if that wasn't clear, in Mr. Bremer's  
10 original patent filings, he admitted that in 1997, a  
11 master/slave network was well known in the prior art.  
12 You will see other documents during this trial that also  
13 prove that point.

14 So for a skilled person in this field, it  
15 would have been obvious to combine the Lucent patent  
16 with these pre-existing master/slave networks.

17 And following this same approach, you will see  
18 that all of the claims that Rembrandt has asserted here  
19 are obvious.

20 You won't have to take my word for it, though,  
21 because Dr. David Goodman, who is a very distinguished  
22 professor and expert in this field, will come here and  
23 testify and explain to you why these claims are obvious.

24 I want to just say in closing, you heard  
25 testimony about -- or not testimony -- argument about



1 damages and Rembrandt's request for you to award  
2 \$30 million.

3 As I said, the evidence will show that  
4 Rembrandt's claims are not infringed and are invalid.  
5 If you agree that they're not infringed and are invalid,  
6 then Rembrandt has no proper demand here, and the only  
7 award that you could make is zero.

8 So Rembrandt will go first with its evidence,  
9 before you hear from Samsung. I ask only that you keep  
10 an open mind and wait until you've heard all of the  
11 evidence before coming to a conclusion.

12 When all the evidence is in, it will show you  
13 that these patents are not infringed and that these  
14 claims are invalid.

15 And I thank you for your attention.

16 THE COURT: All right. Ladies and gentlemen,  
17 we've heard opening statements from both sides. We've  
18 been back from lunch close to two hours -- about an hour  
19 and 45 minutes.

20 We're going to take a brief recess for about 5  
21 to 10 minutes, and then we will begin with the evidence  
22 from the Plaintiff's case.

23 You may leave your notebooks in your chairs  
24 since this is a short recess.

25 Don't discuss the case or anything you've

1 heard so far among yourselves. Take an opportunity to  
2 stretch your legs, get a drink of water, and we'll have  
3 you back in here shortly and continue. But you're  
4 excused for recess at this time.

5 COURT SECURITY OFFICER: All rise for the  
6 jury.

7 (Jury out.)

8 THE COURT: The Court stands in recess.

9 (Recess.)

10 (Jury out.)

11 COURT SECURITY OFFICER: All rise.

12 THE COURT: Be seated, please.

13 Mr. Wolverton, please bring in the jury.

14 COURT SECURITY OFFICER: All rise for the  
15 jury.

16 (Jury in.)

17 THE COURT: Please be seated.

18 All right. Having heard opening statements  
19 from both sides, the Court will call for announcements  
20 on the record.

21 What says the Plaintiff?

22 MR. WARD: The Plaintiff is ready, Your Honor.

23 THE COURT: What says the Defendants?

24 MR. SMITH: Defendants are ready, Your Honor.

25 THE COURT: All right. If you are in the

1 courtroom and you anticipate being a witness in this  
2 trial, then I'm going to ask all witnesses to come  
3 forward at this time and take the oath from the  
4 courtroom deputy.

5 And, counsel, if during the course of the  
6 trial we have witnesses who are not sworn, then we'll  
7 swear them at that time. But this will save us a lot of  
8 time by swearing in everybody at once.

9 All right. If all you witnesses will come  
10 forward, please.

11 Whenever you're ready, Ms. Lockhart.

12 (Witnesses sworn.)

13 THE COURT: All right. You may return to your  
14 places.

15 Does either side wish to invoke the Rule?

16 MR. WARD: We do, Your Honor.

17 THE COURT: Excluding experts?

18 MR. WARD: Excluding experts.

19 THE COURT: If you are fact witness, then you  
20 must remain outside the courtroom until such time as you  
21 are called to testify.

22 So unless you're an expert witness or a  
23 corporate representative, if you are going to otherwise  
24 testify, you should exit the courtroom and remain  
25 outside until you're called.

1 (Excluded witnesses leave the courtroom.)

2 THE COURT: All right. Then is the Plaintiff  
3 prepared to call their first witness?

4 MR. ALAVI: We are, Your Honor.

5 THE COURT: Proceed.

6 MR. ALAVI: Your Honor, the Plaintiffs call  
7 Gordon Bremer.

8 THE COURT: All right. If you'll come  
9 forward, Mr. Bremer. You've just been sworn. Please  
10 have a seat at the witness stand.

11 All right. Counsel, you may proceed.

12 MR. ALAVI: Thank you, Your Honor.

13 Your Honor, we have a copy of the exhibits for  
14 the Court. May I approach Ms. Lockhart and provide you  
15 both with a copy?

16 THE COURT: You may have leave to approach.

17 MR. ALAVI: May it please the Court.

18 GORDON BREMER, PLAINTIFF'S WITNESS, PREVIOUSLY SWORN

19 DIRECT EXAMINATION

20 BY MR. ALAVI:

21 Q. Mr. Bremer, can you introduce yourself to the jury,  
22 please.

23 A Yes. Excuse me. My name is Gordon Bremer. I'm  
24 the inventor of the patents in this suit.

25 Q. And, Mr. Bremer, there's a pitcher of water in

1 front of you and glasses, if you need some water, that  
2 you can always fill up.

3 A Thank you.

4 Q. Where do you live?

5 A I live in Clearwater, Florida.

6 Q. Have you ever testified in trial before?

7 A No. I've never even been in a trial before, much  
8 less be a witness.

9 Q. How are you feeling today?

10 A I'm kind of nervous.

11 Q. Well, it will be over before you know it.

12 Can you tell us briefly about your family.

13 A Yes. I said -- like I said, I live in Clearwater,  
14 Florida, with my wife of 31 years, and I have twin  
15 daughters that are 31 that live nearby.

16 Q. What do you do for a living today?

17 A I'm a retired electrical engineer, and I consult  
18 from time to time.

19 Q. Can you tell us how you ended up becoming an  
20 electrical engineer?

21 A Yes. When I graduated from high school in  
22 Sarasota, Florida, I really didn't know what I wanted to  
23 do, and that summer some of my friends said they were  
24 going to enter the local junior college and take up  
25 electrical engineering.

1           So I thought, well, I'll join them, so that's what  
2 I did.

3 Q.     How did those classes turn out for you?

4 A     Well, I really liked them. I think I fell in love  
5 with engineering, and I completed the first two years of  
6 the junior college.

7 Q.     Did you go on to a four-year college?

8 A     Yes. I was fortunate to receive a scholarship  
9 which helped me pay for the University of Florida, so I  
10 went up to the University of Florida.

11 Q.     Did you get a degree from the University of  
12 Florida?

13 A     Yes, I did. I received a Bachelor of Science in  
14 engineering.

15 Q.     How did you do in your classes?

16 A     I was number one in my class.

17 Q.     Did you get any further degrees after you graduated  
18 from Florida?

19 A.     Yes, I did. Again, I was fortunate. I received a  
20 University of Florida fellowship, which allowed me to go  
21 into the graduate school and complete graduate school.

22 Q.     What did you do after you finished your master's  
23 degree?

24 A.     Immediately upon graduating, I was hired by  
25 Honeywell Corporation in Clearwater, Florida.

1 Q. Tell us a little bit about that first job at  
2 Honeywell.

3 A. Well, I was fortunate. I was hired into a -- a  
4 research and development group that was developing a --  
5 a new type of modem technology.

6 After I got there, I found out that they had --  
7 technology had really come to a stop because they had  
8 a -- found a fatal flaw, and they didn't know how to fix  
9 it.

10 Q. Did you have involvement in the project after that  
11 flaw was discovered?

12 A. Yes. They asked me to look into it with the other  
13 engineers, and I did. And I found the flaw, and I found  
14 a corrective action. I fixed it, basically.

15 Q. And what ended up happening with that product?

16 A. Well, I was really proud of that, because that  
17 product became a modem used in our military throughout  
18 the world, and also the United Nations communication arm  
19 standardized that technology.

20 Q. How did that initial experience at Honeywell affect  
21 the rest of your career?

22 A. Well, I learned that I was good at generating ideas  
23 and solving problems. And I guess after that, that's --  
24 that would seem to be what I really liked to do, solve  
25 problems.

1 Q. How long did you work at Honeywell?

2 A. I was there four years.

3 Q. And when -- where did you go after you left  
4 Honeywell?

5 A. I went to Paradyne Corporation, again, in  
6 Clearwater, Florida.

7 Q. What year was that?

8 A. That was 1974.

9 Q. How old were you at the time?

10 A. I guess I was 29.

11 Q. I hate to ask this. How old are you now?

12 A. 69.

13 Q. Tell us about your initial work when you joined  
14 Paradyne in 1974.

15 A. Well, it was -- it was very similar to what  
16 happened at -- at Honeywell. I joined -- again, it was  
17 a small high-tech group.

18 And once again, they had a major modem development  
19 that had been stopped because of a fatal flaw. It was  
20 a -- a problem. They could not resolve it. The modem  
21 was not reliable, and they didn't know what to do.

22 Q. Did you work on that project?

23 A. Yes, I did. And like at Honeywell, I analyzed the  
24 problem, I found the problem, and I designed a -- a fix  
25 for it.



1 Q. And what happened with that product after the fix  
2 was discovered?

3 A. Well, that product went on to ship. In fact, I can  
4 still remember when -- we had a break room. We were a  
5 small company, about 200 people. And I remember in the  
6 break room one Saturday, I went in, and there was a big  
7 sign. We had shipped our first 20 modems.

8 But Paradyne then grew rapidly. It was a very  
9 successful product. And within about the next six  
10 years, we grew to 4,000 people, and we were one of the  
11 largest employers in the Tampa Bay area.

12 Q. Now, my understanding is Paradyne has gone through  
13 different name changes while you were employed at the  
14 company. Can you walk us through those different name  
15 changes, please?

16 A. Yes. I apologize for my voice breaking up. In --  
17 when I joined in 1974, we were Paradyne Corporation. In  
18 1989, we were purchased by AT&T, and AT&T renamed us  
19 AT&T Paradyne. We remained AT&T Paradyne through 1996,  
20 at which time AT&T spun us off to become a private  
21 company again.

22 And then in 2005, we were purchased by a competitor  
23 by the name of Zhone. And, you know, today, what's left  
24 of the company is Zhone.

25 Q. When did you end up leaving Paradyne?

1 A. I left -- it was actually Zhone by that time. I  
2 left in 2006.

3 Q. How many years had you worked for the company when  
4 you left?

5 A. About 33.

6 Q. Now, in addition to your responsibilities as an  
7 engineer, did you have any responsibility -- other  
8 responsibilities at Paradyne, AT&T Paradyne, Zhone?

9 A. Yeah, it's a mouthful.

10 Yes. In -- in 1980, I realized that Paradyne could  
11 benefit from more innovation and wanted to encourage  
12 innovation, so I developed an innovation program at  
13 Paradyne.

14 Q. What types of formal processes were part of that  
15 innovation program that you developed?

16 A. Well, the key process was a -- was a patenting  
17 program, a process that encouraged patents and would  
18 take inventions, if they were appropriate, and go  
19 through the patenting process.

20 Q. What was your role in that patent process?

21 A. I was chairman.

22 Q. At Paradyne, after you rolled out this innovation  
23 program, what was -- what results did that have on  
24 invention in the company?

25 A. Over the next 25 years, until about 2005, Paradyne

1 had over 400 U.S. patents issued.

2 Q. Now, you testified that you were the chairman of  
3 the program. How long did you hold that position?

4 A. Until I left Zhone in 2006.

5 Q. I'd like to show you on the screen, and if you'd  
6 like to look at the book at the same time, if you can't  
7 see it, Plaintiff's Exhibit 15.

8 A. I see it on the screen. Thank you.

9 Q. Mr. Bremer, can you tell us what this first page of  
10 Exhibit 15 is?

11 A. Yeah. This is a paragraph of an award that I won.  
12 I believe it was in 1994.

13 Q. And what was the award for?

14 A. Well, it was issued by AT&T. It was the Harold S.  
15 Black trophy. It was awarded to the most valuable  
16 commercial patent in 1994.

17 Q. Now, I'm going to skip the second page and go to  
18 the third page. Can you tell us what these awards are  
19 on the third page?

20 A. Yes. The -- the center framed picture, that's  
21 Popular Science magazine, and I believe, again, it was  
22 for that year.

23 And Popular Science every year awards -- or makes  
24 awards to the 100 top innovations in -- in technology,  
25 and a product based on the patents that I invented won

1 that award.

2 Q. Can you tell us what the other two awards on either  
3 side of that are?

4 A. Yes. The -- on the right side, PC Magazine be --  
5 bestowed its Editors' Choice Award on that same product  
6 line.

7 Q. And how about on the left side?

8 A. At -- in Las Vegas, actually, the largest consumer  
9 electronics show in the world, COMDEX, the -- the  
10 product won Best of Show.

11 Q. Have you received any other awards for your work at  
12 Paradyne?

13 A. Yes. Before we left AT&T, I was nominated to be a  
14 Bell Labs fellow, but we were spun off before that came  
15 to fruition.

16 Also, these products that won those awards, they  
17 were demonstrated in the pavilion at Epcot for a year.

18 Q. Now, just to be clear, were any of these awards  
19 that we've gone over for the patents that are in this  
20 lawsuit?

21 A. No, they're not.

22 Q. Okay. Can you tell us generally what your typical  
23 day was like as an engineer at Paradyne? What type of  
24 work did you do?

25 A. Sorry. Sure. I led a group of anywhere from 12 to

1 20 engineers in -- in research development and product  
2 development, also. Most of my -- my efforts were  
3 technical. I was a technical leader, more than just  
4 a -- a manager, if you will.

5 So I spent a lot of my time developing my ideas and  
6 helping other engineers develop their ideas. We -- we  
7 would document those. I spent a lot of time in our  
8 laboratories testing out ideas, debugging products, and  
9 so forth.

10 I also went out to customer sites to help install  
11 products and, again, find problems and fix problems.

12 At times, I even worked at night and -- and  
13 weekends in our manufacturing plant. I remember one  
14 time actually placing components on boards in the  
15 assembly line by hand.

16 Q. Did you enjoy your 33 years at the company?

17 A. Very much so.

18 Q. What did you enjoy the most about the work you did?

19 A. Well, looking back, obviously, to me, the number  
20 one was I worked with a great team of engineers. We  
21 had -- there were -- they tended to be very smart,  
22 industrious, self-driven. That was really a pleasure.  
23 In fact, I still meet with many of them once in a while.

24 The other thing, I was very appreciative of  
25 our executive management at Paradyne. So for 33 years,

1 they kept funding projects that -- that we worked on, so  
2 I was very thankful for that.

3 Q. Mr. Bremer, how many patents and patent  
4 applications have you been awarded?

5 A I have approximately 100 patents and applications  
6 today.

7 Q. Was that typical for engineers at Paradyne?

8 A No. Even though we had a lot of very sharp  
9 engineers, some of whom had patents, the number of 100  
10 was -- was unusually high.

11 Q. I'm going to show you what's been introduced as  
12 Plaintiff's Exhibit No. 1. I'm going to put some of  
13 this up for you.

14 Do you recognize this document?

15 A Yes, I do.

16 Q. What is it?

17 A It's a patent.

18 Q. And what patent is it?

19 A The -- the number on this, let's call -- let's  
20 shorten it to the '580 patent.

21 Q. And who's the inventor on this patent?

22 A I am.

23 Q. And do you understand this is one of the  
24 patents-in-suit in this case?

25 A Yes, I do.

1 Q. And I'm going to show you Exhibit 2. Do you  
2 recognize this document?

3 A Yes. It's another patent.

4 Q. And what patent is this?

5 A Let's refer to it as the '228.

6 Q. And who's the inventor on this patent?

7 A I am.

8 Q. And do you understand this is one of the  
9 patents-in-suit?

10 A Yes, I do.

11 Q. Before I get into the patents, I'd like to ask you  
12 to help us understand a few terms.

13 Can you tell us what the term "modem" stands for?

14 A Yes. It means it's a contraction of two words:  
15 Modulator and demodulator.

16 Q. Can you tell us generally what a modem is?

17 A Yeah. Maybe there's some examples that we could  
18 look at.

19 Q. Okay.

20 A Generally, though, a -- a modem takes information  
21 and converts a signal based on that information so that  
22 the information can be sent.

23 Q. Okay. Do you have a demonstrative that would help  
24 you explain what a modem is?

25 A Yes, please.

1 Q. Let me get to that.

2 Okay. This is a slide we put up. Will this help  
3 you describe what a modem is?

4 A Yes, it will.

5 But before I draw your attention to the slide, many  
6 of us remember modems as being, you know, relatively  
7 large boxes that connect, for example, to a PC and maybe  
8 connect to a cable or to a telephone plug. But modems  
9 are -- are much more than that and can be much smaller  
10 than that.

11 In fact, really, any -- any electronic device that  
12 communicates data has to have a modem in it. That's --  
13 a modem is essential for data communication over some  
14 type of channel.

15 Q. So why don't you tell us what this slide at this  
16 point, this demonstrative is showing.

17 A Okay.

18 THE WITNESS: Thank you.

19 A We see here two -- two cell phones, and every cell  
20 phone has a modem in it, every one. And that modem  
21 is -- is necessary, and I'll show you why in a minute.

22 THE WITNESS: So maybe you could click to the  
23 next --

24 A So we know that with a cellular modem -- or with a  
25 cellular phone, rather, that we need to -- we want to



1 talk into it or text into it, and we want to be able to  
2 send that information over the airwaves through a  
3 cellular network probably to another cell phone.

4 THE WITNESS: So if you could click.

5 A So what happens, the voice or text goes into the  
6 modem -- goes into the phone first and then into the  
7 modem, which is part of the cell phone. The modem  
8 converts that voice or text into a signal. The signal  
9 is suitable for going over the airwaves and through the  
10 network.

11 THE WITNESS: So maybe you can click and --

12 A So we see the signal going through the -- the  
13 network, and the signal is received by a remote cell  
14 phone, the one on the right, and it goes into the modem  
15 that's inside that cell phone.

16 And what that modem does, it now demodulates the  
17 signal. It converts it back into either the text or the  
18 voice. And then the cell phone outputs that to the --  
19 the other person.

20 Q. (By Mr. Alavi) Was this concept of modems existing  
21 in phones and not just these big boxes, was that true in  
22 1997?

23 A Oh, yes, uh-huh.

24 Q. And what other types of devices, other than cell  
25 phones and the boxes we connect in our computers,

1 contain modems inside them?

2 A Well, as I mentioned before, basically, any -- any  
3 electronic device that needs to communicate through the  
4 air, through a wire, through a cable has to have a modem  
5 in it.

6 And, for example, here we have cell phones, and  
7 like I said, every cell phone has a modem device in it.  
8 Every WiFi, whether it be a router or whether it be a  
9 WiFi device in your home, has to have a modem in it.  
10 Every Bluetooth device in your car, in your phone has to  
11 have a modem in it.

12 So those are some of the -- some of the common  
13 examples today.

14 Q. You used a term when you were describing modems,  
15 modulation. Can you tell us or help describe for us  
16 what modulation is?

17 A Like I said, modulation is the concept of  
18 converting information into a signal that can be sent.  
19 Probably two examples that we'd all recognize with  
20 radios are frequency modulation and amplitude  
21 modulation.

22 Q. And what are the differences between, for example,  
23 frequency modulation, FM and AM?

24 A Well, first of all, they're not compatible. If you  
25 have a radio that's only FM, you're not going to receive

1 AM. And vice versa, if you have a radio that's AM only,  
2 you're not going to receive FM.

3 And so why -- why have it? Why not have just one?

4 And the reason is, is that each has its own  
5 advantages but then also disadvantages.

6 With FM, if we're near a station, we get good  
7 quality sound, top quality sound, but as we move away,  
8 the range is limited and the signal drops off; whereas  
9 with AM, we -- the sound quality isn't as good but the  
10 range is much, much greater. So there's a tradeoff.

11 Q. Now, I'd like to talk about the invention that you  
12 worked on at Paradyne. What were you actually working  
13 on? What type of project when you came up with the  
14 invention?

15 A Well, in early 1997, my team was developing a new  
16 technology that I'll -- I'll call burst technology. It  
17 was a communication technology. We're bursting right  
18 now back and forth. That -- it was a -- perhaps a poor  
19 way to describe it, but it was a burst technology.

20 And it was intended for Internet access. So this  
21 is technology that was at highest speed and complex as  
22 possible.

23 Q. And what type of actual physical product were you  
24 working on?

25 A It was a modem.

1 Q. And while you were working on this modem, what was  
2 it that led you to come up with your invention?

3 A Well, during the time of that -- that development  
4 that I just mentioned, I was reading in magazines and  
5 hearing something on the TV about a new type of  
6 communication service where an individual away from the  
7 home could communicate into the -- into the home into  
8 devices, such as power-monitoring power control,  
9 controlling your TV, light switches, refrigerators,  
10 things like that. So I -- I realized that was an  
11 opportunity.

12 Q. And how did this opportunity about -- these devices  
13 that might be going into the home, how did that lead you  
14 to come up with your invention?

15 A Well, first, I realized that the communication  
16 that -- that we had under development and the  
17 communication required for the power monitoring and  
18 control required different types of modulation and  
19 different modems.

20 Q. Why -- why was it an issue that they needed  
21 different types of modulations in these modems? Why was  
22 that a problem?

23 A Well, they had -- they had very different  
24 performance and size and power requirements.

25 Q. And so what would happen if you'd have these modems

1 that required different modulations trying to work  
2 together?

3 A They were incompatible. So you basically could --  
4 could not, at the same time, communicate with -- with  
5 both the high-speed Internet modems and these other  
6 power-monitoring modems.

7 Q. In addition to incompatibility, were there any  
8 other issues that arose from using different types of  
9 modulations?

10 A Well, because they were incompatible, you  
11 couldn't -- you couldn't communicate at all and you  
12 couldn't communicate seamlessly.

13 I think I provided a -- a slide for this.

14 Q. Well, before we get to that, I want to go through a  
15 few documents with you --

16 A Okay.

17 Q. -- if that's okay.

18 A Sure.

19 Q. If we can take a look and I'll show you what's  
20 Plaintiff's Exhibit 7 and blow this up.

21 Do you recognize this document, Mr. Bremer?

22 A Yes. This is what we referred to as a broadband  
23 tech note. In this case, it was Broadband Tech Note  
24 No. 137.

25 Q. And what were tech notes used for at Paradyne?

1 A. Well, it was a policy in Paradyne that when a -- an  
2 engineer or other individual either had a new idea or  
3 had a -- needed to explain an existing idea or explain  
4 something in detail technically, they would document  
5 their idea in -- in a tech note.

6 Q. And who's the author of this particular tech note?

7 A. Myself.

8 Q. And what topic does it deal with?

9 A. It's embedded modulations.

10 Q. And what is that?

11 A. That's the subject of the patents in front of us.

12 Q. And what's the date that this document -- I'm going  
13 to actually highlight the significance. What's the  
14 significance of this June 8th, 1997 date?

15 A. June 8th, 1997, that was the date that I -- I  
16 formally entered this -- this tech note into the system  
17 at Paradyne, and -- and that -- that's when everyone had  
18 access to it.

19 Q. Is this the first date you came up with your  
20 invention?

21 A. No. I came up with the concept in early 1997.

22 Q. And I want to show you what's been marked as  
23 Plaintiff's Exhibit 5. I'll blow it up again. Do you  
24 know what this document is?

25 A. Yes. This is a provisional patent application.

1 Q. Can you tell us what a provisional application is?

2 A. Well, it's the -- when you have an invention that  
3 you wish to -- to patent and it's -- you've documented  
4 it, this is the -- the provisional application is the  
5 first formal submittal to the U.S. Patent Office.

6 Q. And who's the inventor on this provisional  
7 application?

8 A. I am.

9 Q. And what's the date of this application?

10 A. This was December 5th, 1997.

11 Q. And what's the relationship between the tech note  
12 we saw, which was Exhibit 7, and this 1997 provisional  
13 application?

14 A. All of the information that was in the tech note is  
15 in this provisional application.

16 Q. And I'd like to take a look at Page 7851. It's at  
17 the bottom of the page numbers, and I'll pull it up for  
18 you, the provisional application. And I'm pulling up  
19 Paragraph 3. Do you see that highlighted -- highlighted  
20 language?

21 A. Yes, I do.

22 Q. What were you discussing in this highlighted --  
23 highlighted language in the provisional application?

24 A. Well, I was -- I was pointing out in this document  
25 the -- the need for an application of power monitoring

1 and control.

2 Q. And what does that mean?

3 A. Well, it's what I discussed earlier. It's -- it's  
4 being able to, from a remote location, communicate into  
5 your home and be able to turn power on and off, adjust  
6 it, and monitor it.

7 Q. Now, you talked earlier about this concept of  
8 incompatibility. Do we have a demonstrative that you  
9 can use to describe that problem?

10 A. Yes, I do. Thank you.

11 Q. Let me pull it up here.

12 Would you describe the issue of incompatibility  
13 that you were dealing with and walk us through this --  
14 this exhibit, please?

15 A. Yes. First, let me kind of describe what -- what's  
16 on this -- on this graph.

17 We have a master. That's a master modem. That's  
18 basically the controlling-communicating modem. We have  
19 four devices that that master wishes to communicate  
20 with. We have a television, an alarm system, a light  
21 switch, and a thermostat.

22 And we're going to talk about modulations, and --  
23 and rather than use some complicated term for different  
24 modulations, I've chosen to relate a modulation to a --  
25 a language. And in this case, I've chosen the Chinese



1 language. So --

2 Q. So what does CHN mean, for example, on the master?

3 A. That means Chinese.

4 Q. And what -- if you look at the TV where it says  
5 ENG, backslash, Chinese, what does that mean?

6 A. Well, what I intend there is that the TV, it can  
7 communicate in Chinese, for example, very low speeds --  
8 speeds comparable to the -- the light switch, but it can  
9 also have the capability inside -- the modem inside can  
10 speak in English. And we'll get to English in a minute.

11 Q. Okay. So let's go to the next slide. And tell us  
12 what's happening here.

13 A. Okay. So I'm suggesting we want to be able to  
14 communicate in English. Perhaps the -- English or  
15 actually the -- the modulation is perhaps much higher  
16 speed, and now we can actually send a video signal to  
17 the TV if we communicate in English.

18 So we've introduced a master that speaks English;  
19 however, English is not compatible with Chinese. So now  
20 we've lost communication with the other devices.

21 Q. So what does the -- the fact that there are Xs on  
22 these flags mean?

23 A. Well, that means that that communication is not  
24 possible.

25 Q. Is that what you just meant by incompatibility?

1 A. Yes, it is.

2 Q. Okay. I'm going to take a look at your provisional  
3 application again. And, again, we're at Page 7850. And  
4 I'm pulling out the second and third paragraphs, and I'm  
5 highlighting some language there.

6 What were you discussing in your provisional  
7 application when you -- in this language that's  
8 highlighted in these paragraphs?

9 A. I was discussing what I just mentioned, the fact  
10 that these -- these tribs, these lower speed tribs  
11 are -- are not compatible with the higher speed. So  
12 lack of compatibility.

13 Q. Now, you talked a little bit about losing the  
14 communication on the network, the seamless  
15 communication.

16 Do you remember that?

17 A. Yes, I do.

18 Q. Do you have a demonstrative that helps you explain  
19 that concept?

20 A. Yes, I do.

21 Q. So let's pull that up.

22 So walk us through this concept of no seamless  
23 operation, and tell us what's going on in the slide  
24 here.

25 A. Okay. So we're back to where we started earlier.

1 We have a -- a modem -- a master modem talking Chinese  
2 and is successfully talking to the -- the other  
3 products, although the TV, you're just getting maybe  
4 power control, for example.

5 Q. Okay.

6 A. Could you click?

7 Q. Sure.

8 A. Okay. Now, this is prior -- we're still prior to  
9 the invention that I came up with.

10 Now we've introduced a master that speaks English  
11 and Chinese -- speaks both. And what we've done here,  
12 we've set it up in the English mode -- the English  
13 modulation, and it's able to speak with the TV in  
14 English, but it still can't speak with the Chinese  
15 devices.

16 Could you click?

17 Q. Sure.

18 And what's -- what's going on here now?

19 A. Now, let's say we want to speak with the Chinese,  
20 well, we can change -- we can swap over. The trouble is  
21 that in doing so, the communication goes down for quite  
22 a -- often -- quite a period of time.

23 Maybe you can remember dial modems and fax modems  
24 where you'd make a -- a connection and -- and you'd hear  
25 this beep, beep, and the communication -- you couldn't

1 communicate for a half a minute or even more. So that  
2 would be -- that would be disruptive. And that is  
3 what -- what I refer to as not seamless.

4 So in this case, lo and behold, we can speech  
5 English to the TV and get video, but the other devices  
6 are out of service, which means that if you're trying to  
7 control them remotely, you couldn't do so.

8 Q. So now we've got another slide. What's happening  
9 here? Is this just showing going back and forth?

10 A. Yeah. It's just simply going back. So now -- now  
11 we're speaking -- we're speaking English.

12 I think we missed a slide in between there.

13 Q. I think we've got it.

14 There's the English, the Chinese, and then back --

15 A. Yes. Right. Right.

16 So now we're speaking English again. And so you  
17 can see the key problem here is lack of seam --  
18 seamless.

19 We've -- we've kind of solved the compatibility  
20 problem perhaps in a way, but you've got this -- this  
21 large disruption, so the devices can communicate at the  
22 same time.

23 Q. Let's look at your provisional application again.  
24 And I'm at still Page 7850, and I'm at Paragraph 1, and  
25 I've highlighted this language.

1 Can you tell us, in 1997, what you're discussing in  
2 this language of your provisional application?

3 A. Yes. The highlighted section is what I just  
4 discussed. The -- the -- in order to work in two  
5 different modulations or two different languages, it  
6 requires data disruption.

7 So what I was doing here was acknowledging the  
8 compatibility, and in this case, the lack of seamless  
9 operation in the provisional application.

10 Q. Now, what was your solution? How did you solve  
11 this problem of incompatibility and lack of seamless  
12 communication?

13 A. I did solve it. The -- you know, it occurred to me  
14 that you see the two problems here. The -- the two  
15 languages and the two modulations weren't compatible.  
16 And if you tried to make them work, you had this large  
17 disruption.

18 So what -- what was needed was a seamless way, a  
19 non-disruptive way, where you could communicate two  
20 modulations or two languages really at the same time, so  
21 you -- it appeared to be seamless.

22 Q. And what's the solution to the problem?

23 A Well, I kind of had an ah-ha moment, and I came up  
24 with what I believe is a pretty elegant solution to  
25 that.

1           And based on our burst technology that we were  
2   developing, I realized that if -- to oversimplify  
3   perhaps, but if I put an indicator at beginning of each  
4   burst, each communication that said change the -- the  
5   modulations, this -- this change could happen basically  
6   instantly, and you could communicate with the different  
7   types of devices without -- without major communication  
8   disruption.

9   Q.     So do you have another demonstrative that shows how  
10  the -- the solution works?

11  A     Yes, I do.

12  Q.     Okay. Tell us -- I think we've seen this slide  
13  before.

14  A     Yeah, we've seen it before.

15           So we're back to the original slide where the --  
16  the modem is speaking only Chinese, in this case,  
17  slow -- slow speed.

18           THE COURT: Gentlemen, let's make sure you  
19  both talk one at a time.

20           Continue, Counsel.

21           MR. ALAVI: Apologize, Your Honor.

22           THE WITNESS: Sorry.

23  Q.     (By Mr. Alavi) Let's go to the next slide. And  
24  tell us what this represents.

25  A     Okay. Now what we're doing, this slide represents

1 the invention, and the invention overcomes the  
2 compatibility problem and overcomes the seamless  
3 problem.

4 So the result is that the -- the master can  
5 communicate in -- can -- yes -- can communicate video in  
6 English, in this case to the TV, and at the same time,  
7 without any interruption, be communicating with the  
8 other devices.

9 Q. Now, Mr. Bremer, to be clear, we've been talking  
10 about -- you talked about an example of communicating  
11 video. Were -- you're not suggesting that in 1997, that  
12 houses were streaming video to TVs, were you, through  
13 these devices?

14 A Not yet, no.

15 Q. Are you talking about what you anticipated coming  
16 in the future based on reading articles and  
17 understanding what was going on in the industry?

18 A My -- my recollection, it was -- we were on the  
19 verge of being able to do that.

20 Q. Now, once you had your idea, what kind of work did  
21 you put into it to get to -- get the invention  
22 finalized?

23 A Well, I did a couple of things. One is I -- I put  
24 the -- the invention into our patenting system for  
25 review and consideration.

1 Q. Okay. Let's take a look at Exhibit 9. And I'm  
2 pulling this up. Can you tell us what Exhibit 9 is,  
3 please?

4 A Yes. This is a patent disclosure.

5 Q. And what is this for?

6 A This is for the -- the invention, the embedded  
7 modulations.

8 Q. And how is this part of the Paradyne patent  
9 process?

10 A Well, this was really the -- the first step of the  
11 formal process. So the inventor, in this case,  
12 myself -- the inventor's required to document the --  
13 the -- the invention and answer certain questions so  
14 that those -- those questions can be reviewed by others.

15 Q. And what happens with the patent disclosure form,  
16 how is it used in the process?

17 A Well, we had -- the patent process had a group of  
18 individuals that was -- that were referred to as the  
19 patent review board. It consisted of engineers in  
20 different departments throughout the company, a patent  
21 attorney, and certain business people.

22 Q. And what would they do with these patent disclosure  
23 forms?

24 A Well, the disclosure form was circulated to the  
25 patent review board and a date was set for that review



1 board to meet and consider the invention.

2 Q. And what's your understanding of what the patent  
3 committee mentioned?

4 A The board approved proceeding, which is attempting  
5 to receive a patent.

6 Q. In addition to going through this patent review  
7 process, what other kind of work did you do to your  
8 invention until you came up with the idea?

9 A Let the record reflect, of course, the real goal of  
10 the invention is not necessarily the -- the patent. So  
11 we -- we wanted to get the invention in -- into our  
12 product line.

13 So, you know, I worked with my time to incorporate  
14 the -- the key parts of this into our burst technology  
15 that I mentioned, and the remainder of that year, I  
16 worked both on the patent -- the patent system, as well  
17 as working with that team to implement the invention and  
18 test it in our laboratory.

19 Q. Now, did Paradyne ever sell a product that had your  
20 invention in it?

21 A No, it did not.

22 Q. So let me ask you about the '580 patent, which is  
23 Exhibit No. 1, do you know how that patent is related to  
24 the 1997 provisional application?

25 A Yes, I do.

1 Q. And how is it related?

2 A It's what's called a continuation of the original  
3 patent.

4 Q. Now, how about the '228 patent, which is Exhibit 2?  
5 Do you know how that patent is related to your 1997  
6 provisional application?

7 A Yes, it is also a continuation of the original.

8 Q. Now, as an inventor, what's your understanding of  
9 what a continuation patent is?

10 A Okay. I'm not an attorney, but my understanding of  
11 what a continuation is, it's a formal term in the Patent  
12 Office.

13 And when -- when an application -- a patent  
14 application is submitted, the inventor, along with the  
15 patent attorneys, are -- you have to describe your  
16 invention, and you have to describe at least one  
17 implementation of it so that someone could build it.

18 So you describe it as well as possible. However,  
19 at the end of the patent, you need to write a number of  
20 single-sentence -- single sentences that are called  
21 claims. And each claim is intended to describe a part  
22 of your invention that you want to be able to protect.

23 So in the first patent, you know, you have your  
24 description, and now you submit a number of claims with  
25 it, and you describe those parts of the invention that

1 you think are most important to protect.

2 Q. Have any of your other patents had continuations  
3 involved in them?

4 A Excuse me. I really didn't finish about a  
5 continuation.

6 So what happens -- the Patent Office recognizes  
7 that in that first patent, you may not have claimed  
8 everything that was -- was important to you.

9 So the idea of a continuation is that it gives  
10 you -- or gives the inventor an opportunity -- without  
11 adding any new information, but it gives you the  
12 opportunity to list new claims and actually get a new  
13 patent, which is called a continuation.

14 Q. Sorry for interrupting you earlier, Mr. Bremer.

15 On these continuations, have you had other patents  
16 that have had continuations?

17 A Yes. In fact, about -- about 25 percent of my  
18 patents are actually continuations.

19 Q. Can you tell us what a trib is?

20 A Yes. A trib, it's a terminology common in modem  
21 communication. It's also called a slave. They're  
22 interchangeable. And there's another modem called --  
23 another terminology called a master.

24 And a master in communication is the -- the modem  
25 that's really controlling communication between two or

1 more -- or one or more other -- other modems. And the  
2 trib or the slave are those other modems.

3 Q. Do you know what a bilingual trib is?

4 A Yes, I do.

5 Q. What is a bilingual trib?

6 A A bilingual would refer to a -- a trib modem that  
7 can participate in -- in two modulations, two different  
8 modulations.

9 Q. Now, I'd like to look at your provisional  
10 application again, which is Exhibit 5. And we're again  
11 at Paragraph 2 in the first paragraph, and I've  
12 highlighted some language.

13 Do you see that, Mr. Bremer?

14 A Yes.

15 Q. It says: Although the modem equipment may contain  
16 several selectable modulations...

17 Can you tell us what you were describing in the  
18 provisional application in 1997?

19 A Yes. This was what I just described, bilingual  
20 tribs for one.

21 Q. I'd like to show you Exhibit 6. Do you know what  
22 this document is?

23 A Yes, I do.

24 Q. And what is it?

25 A It's the file history for the original patent.

1 Maybe I should describe what a file history is.

2 Q. Let me get -- find out first what this is.

3 A All right.

4 Q. Which original patent is that, Mr. Bremer?

5 A This was the -- the first patent that resulted from  
6 the provisional application.

7 Q. Okay. And what's the number of that patent?

8 A It's the '838.

9 Q. And generally speaking, what is a file history?

10 A. Once the -- once the inventor submits the  
11 provisional application and then a -- a final  
12 application to the Patent Office, there's correspondence  
13 that goes back and forth between the -- the inventor and  
14 the Patent Office to iron out details and define things  
15 that perhaps were not clear. And the file history is a  
16 record of that correspondence.

17 Q. Now, what I've pulled up as Page 7462 -- and I'm  
18 going to blow up the bottom of that. Can you see that,  
19 Mr. Bremer?

20 A. Yes, I -- yes, I do.

21 Q. Can you tell us what this language in the file  
22 history of the very first patent discloses?

23 A. Yes. Well, this was Claim 23 in the application.  
24 And what this claim is describing is a bilingual master  
25 and a bilingual trib.

1 Q. Now, I want to talk to you a little bit about the  
2 Plaintiff in this case, Rembrandt. Can you tell us how  
3 you first came to meet the people at Rembrandt?

4 A. Yes. In -- I believe it was 2004, Rembrandt  
5 visited Paradyne Corporation and expressed an interest  
6 in purchasing some patents.

7 Q. And did you start to do some work for Rembrandt at  
8 some point?

9 A. Yes, I did. I left Paradyne or Zhone, actually, at  
10 that time in -- in 2006, and entered into a contract --  
11 or better way is I -- I started consulting with -- with  
12 Rembrandt.

13 Q. And did you do that consulting through a contract,  
14 or how did that work?

15 A. There was a company -- a small company set up, and  
16 I actually consulted with Rembrandt through that  
17 company.

18 Q. Let me pull up what's Defendants' Exhibit 11 -- I  
19 mean, 1011, and blow this up. Do you know what this  
20 document is?

21 A. Yes. This -- this is the consulting agreement with  
22 a company that I -- I worked with Rembrandt through.

23 Q. And what was the name of that company?

24 A. It was called Attic -- Attic IP.

25 Q. Are you still performing consulting services for

1 Rembrandt under this agreement?

2 A. No, I am not.

3 Q. When did you stop performing services under this  
4 agreement?

5 A. I believe it was September of 2009.

6 Q. Can you tell us, excluding expense reimbursements,  
7 rent reimbursements, how much you were directly or  
8 indirectly paid by Rembrandt under this agreement?

9 A. About -- over a three-year period, it was about  
10 \$500,000.

11 Q. And over that three-year period, how much were you  
12 working? How many hours a week were you working on  
13 these projects?

14 A. It was 40 hours a week, all week.

15 Q. Now, after this agreement expired, did you enter  
16 into any other agreements with Rembrandt?

17 A. Yes, I did.

18 Q. So what I've pulled up for you is -- and before we  
19 get into that, what I'd like to ask you is, under those  
20 agreements, including the Attic agreement, can you tell  
21 us in total, excluding expense reimbursements from --  
22 that type of thing, how much you've been paid directly  
23 and indirectly by Rembrandt?

24 A. Over the last nine years, it's about \$670,000.

25 Q. Now, I've pulled up Defendants' Exhibit 1012. Do

1 you know what this document is?

2 A. Yes. This is another consulting agreement, this  
3 time between myself, as -- as an individual, and  
4 Rembrandt.

5 Q. And what -- what type of work were you doing under  
6 this agreement?

7 A. I was consulting on an hourly basis.

8 Q. Now, what kind of consulting work were you doing?

9 A. I was -- patent work, re -- reviewing patents.

10 Q. Now, is this -- does this agreement cover your  
11 current working relationship with Rembrandt?

12 A. No, it does not.

13 Q. Okay. Do you have a current working relationship  
14 with Rembrandt?

15 A. Yes, I do.

16 Q. And are there contracts that cover that  
17 relationship?

18 A. Yes, there are.

19 Q. Okay. And tell us generally what types of  
20 agreements you have with Rembrandt today.

21 A. I have two. I don't know if you can show them.

22 Q. Sure. Let's pull up the first one. And this is  
23 Defendants' Exhibit -- Exhibit 1013. Do you know what  
24 this document is?

25 A. Yes, I do.



1 Q. And what is it?

2 A. Well, it's an agreement between myself and  
3 Rembrandt where the objective is for me to continue to  
4 come up with ideas and -- and make inventions and  
5 receive patents.

6 Q. Okay. And have you actually performed work under  
7 this agreement?

8 A. Yes. Recently, I -- we -- I'll say "we" -- filed a  
9 new patent.

10 Q. And when you say "we," who are the inventors on  
11 that patent?

12 A. Besides myself, Dr. Paul Schneck.

13 Q. Now, how are you compensated under this agreement,  
14 the inventor services agreement?

15 A. I believe I receive 2-1/2 percent of the -- the  
16 revenue that Rembrandt receives from the various patents  
17 that I've invented.

18 Q. Does that include the patents in this case?

19 A. Yes, it does.

20 Q. Now, do you have another agreement with Rembrandt?

21 A. Yes, I do.

22 Q. Okay. Pull that up. And this is Exhibit 1014.  
23 Can you tell us what this agreement is?

24 A. Yes. This is a -- referred to as a consulting  
25 agreement.

1 Q. And what types of services do you provide under  
2 this agreement?

3 A. Under this agreement, I'm asked to assist Rembrandt  
4 in the enforcement of patents.

5 Q. What types of work does that include?

6 A. I'm here today.

7 Q. Does this cover the work you're doing, such as  
8 being here to testify today?

9 A. Yes, yes.

10 Q. And let's go to Page 36409, and I'm going to pull  
11 that up.

12 Can you tell us how you're paid under this  
13 agreement? And I'd like to walk -- walk through it.

14 Section 4.1.1 -- 4.1.2, I've highlighted it for  
15 you. Can you tell us how you're getting paid for the  
16 work you do, including your time testifying?

17 A. Yes. The -- I was paid basically at signing  
18 \$50,000, and then later, by March 31st, or at the filing  
19 of the patent infringement suit, I was paid another  
20 \$50,000. And then basically a year later, I was paid  
21 the final \$50,000.

22 Q. And I didn't highlight Section 4.1.4, but can you  
23 tell us what that covers?

24 A. Yeah. After all -- all this is said and done,  
25 if -- if I continue to consult after two years, I'll be

1 paid \$300 an hour.

2 Q. Now, at some time did you come to believe or  
3 suspect that Bluetooth products that had EDR in them  
4 might infringe your patents?

5 A. Yes, I did.

6 Q. And how did you find that out?

7 A. In 2007 -- or it might have been 2008, when I was  
8 consulting for Rembrandt, I -- I came across the -- the  
9 Bluetooth specification. And in reading through that,  
10 it appeared to me that my patents -- some of my patents  
11 may read on that -- that Bluetooth standard.

12 Q. And what did do you when you discovered that?

13 A. I brought it to the attention of Rembrandt.

14 Q. How do you feel about your relationship with  
15 Rembrandt today?

16 A. I'm very proud of working with them.

17 Q. Why is that?

18 A. Well, a couple of reasons. Like I mentioned, they  
19 give me an opportunity for -- for nine years now to --  
20 to work with them and to pursue additional patents and  
21 analyze patents.

22 And, you know, frankly -- you know, I -- I invented  
23 these patents, and I'm -- I'm very proud of the patents.  
24 And I'm not an owner of the patents, but it doesn't  
25 matter that I'm -- I'm still very proud.

1           So I want to see those patent rights, which the  
2 Patent Office bestows on patents, I want to see those  
3 properly defended.

4           And I can -- I could never do that myself, and I --  
5 I really appreciate the fact that -- that Rembrandt  
6 has -- has taken that on and that I can help and team  
7 with them to do that.

8           MR. ALAVI: Your Honor, we pass the witness.

9           THE COURT: All right. Cross-examination by  
10 the Defendants.

11           MR. SMITH: Your Honor, may I approach the  
12 witness with a notebook?

13           THE COURT: You may. If you'll hand it to the  
14 CSO.

15           All right. Counsel, you may proceed.

16           MR. HADDAD: Thank you, Your Honor.

17           May it please the Court. I need a step stool  
18 here.

19   CROSS-EXAMINATION

20           BY MR. HADDAD:

21 Q.    Good morning, Mr. Bremer. My name is Gerard  
22 Haddad. I'm an attorney for Samsung. I haven't met you  
23 today. Very nice to meet you.

24 A    I'm sorry. I didn't catch your last name.

25 Q.    Gerard Haddad. I'm with the attorneys for Samsung.

1           Mr. Bremer, you understand that Rembrandt in this  
2 case is accusing Bluetooth, correct?

3       A     Yes, I do.

4       Q.    And you understand specifically that this case is  
5 about a particular feature of Bluetooth, isn't that  
6 right, called EDR?

7       A     I'm not sure of that.

8       Q.    Did you -- well, did you -- do you understand that  
9 there's an organization called the Bluetooth Special  
10 Interest Group that came up with the Bluetooth standard?

11      A     I believe I've heard of that, but I can't be sure  
12 of the name.

13      Q.    So you didn't make any contributions yourself to  
14 the standards body known as the Bluetooth Special  
15 Interest Group?

16      A     No, I did not.

17      Q.    So are you aware that the Bluetooth Special  
18 Interest Group is the organization that developed the  
19 standard for Bluetooth?

20      A     No, I'm not aware of that.

21      Q.    And you are aware, aren't you, that the Bluetooth  
22 standards body is the organization that actually  
23 developed the particular feature of Bluetooth called EDR  
24 that's asserted -- that Rembrandt asserts is covered by  
25 the patents in this case?

1 A No, I'm not aware of -- I'm not aware of that --  
2 that particular group.

3 Q. So --

4 A So I can't be sure.

5 Q. So you didn't participate in the Bluetooth  
6 standards body group; is that correct?

7 A Yes.

8 Q. And you didn't attend their meetings when they were  
9 developing the standard; is that right?

10 A Yes.

11 Q. And -- sorry. And, in fact, Mr. Bremer, you didn't  
12 contribute anything to the -- to the development of the  
13 Bluetooth standard when those -- when that group was  
14 meeting to develop that standard. That's right,  
15 correct?

16 A I made no contributions to the standards body.

17 Q. Okay. And not even to be the EDR portion of --  
18 that the standards body was developing; is that right?

19 A I made -- I made no contributions to the standards  
20 body.

21 Q. And I believe you just mentioned that the first  
22 time you ever -- well, I take that back.

23 Is -- the first time you ever heard of Bluetooth  
24 was around 2007; is that right?

25 A Yes.

1 Q. And is -- and it's true that that's the first time  
2 you ever even heard of the feature of Bluetooth called  
3 EDR, correct?

4 A I don't know.

5 MR. HADDAD: Can I bring up on the screen a  
6 transcript cite?

7 Q. (By Mr. Haddad) Mr. Bremer, did you have your  
8 deposition taken in this case back in October?

9 A Yes, I did.

10 Q. And do you remember -- do you have a copy of the  
11 transcript, sir? I believe we handed one up.

12 A Yes.

13 Q. Okay. I believe it's in two volumes. If you can  
14 turn to the one that's dated October 16th, please.

15 And if you turn to Page 61 of that transcript, sir,  
16 do you see at Line 17 of Page 61, you were asked the  
17 question: When did you first learn of that -- that  
18 enhanced data rate aspect of Bluetooth?

19 And you answered: I believe -- I believe it was  
20 2007.

21 Do you remember giving -- being asked that question  
22 and giving that answer?

23 A I'm sure I did.

24 Q. So you believe that it was 2007 when you first  
25 learned of Bluetooth EDR, correct?

1 A I presume you mean EDR means enhanced data rate?

2 Q. Yes.

3 A Okay. Anyway, I stand by what I said in the  
4 deposition.

5 Q. And do you understand that Bluetooth with EDR came  
6 out three years earlier, in 2004?

7 A I don't know that.

8 Q. Do you understand that the application for the  
9 patent that's in suit here today, the '580 patent, was  
10 filed in 2009?

11 A I'll -- I'll have to -- I'll have to look at it.

12 THE COURT: You'll need to speak up,  
13 Mr. Bremer.

14 A I'll have to look at that. I don't recall.

15 Q. (By Mr. Haddad) If you turn to DX-1001, the first  
16 exhibit.

17 A Yes, I see it.

18 Q. So do you see the -- the part -- I don't know if  
19 you can see on the monitor.

20 A I can see it better on the monitor. Thank you.

21 Q. Okay. Now that you have seen DX-1001, the '580  
22 patent, would you agree that that patent was filed in  
23 2009?

24 A Yes, I would.

25 Q. And that was Rembrandt that filed that application;



1 is that correct? That wasn't you, correct?

2 A Yes. It must have been -- I presume it was Rem --  
3 it was not me.

4 Q. Okay. Well, you never owned these patents; is that  
5 right?

6 A That's right.

7 Q. So the people that were working on Bluetooth back  
8 in 2 -- earlier than 2004, when they were working on the  
9 EDR feature that came out in 2004, they couldn't have  
10 seen this patent, the '580 patent; is that right?

11 A I don't know.

12 Q. Would you agree that if EDR came out in 2004 and  
13 the '580 patent was filed in 2009 that the people who  
14 had worked on EDR before 2004 couldn't have seen the  
15 '580 patent?

16 A Yes.

17 Q. I'd like to turn now, sir, to your relationship  
18 with Rembrandt.

19 So you've been hired as a consultant for Rembrandt  
20 in this case; isn't that right?

21 A Yes, it is.

22 Q. And you've done consulting for Rembrandt before  
23 this case, isn't that right, in other matters?

24 A Yes. Yes.

25 Q. Yes. Mr. Bremer, Rembrandt didn't buy the patents

1 in this case from you; is that right?

2 A. Yes, that's right.

3 Q. They bought them from a company called Zhone,  
4 correctly -- correct?

5 A. I don't know.

6 Q. But was Zhone your former employer?

7 A. As -- as I testified earlier, I worked for a  
8 company called Paradyne and successors and other names,  
9 and I can't be sure who or which of those companies sold  
10 the patents.

11 Q. Okay. So you -- you weren't in -- you weren't an  
12 inventor who owned a patent who then came to Rembrandt  
13 looking for someone to help you assert your patent  
14 rights; is that correct?

15 A. I was not an owner.

16 Q. And, in fact, Rembrandt acquired the patents first,  
17 and then you -- you began the consulting arrangement  
18 that you have with Rembrandt today for this case; isn't  
19 that true?

20 A. Would you repeat that, please?

21 Q. Rembrandt acquired patents first, and then you  
22 began your consulting arrangement for this case with  
23 Rembrandt after that; isn't that right?

24 A. Are you referring to the -- what -- what -- what  
25 consulting agreement are you referring to?

1 Q. Well, you have had several consulting agreements.  
2 I'm talking about the consulting agreement in this case  
3 that relates to your work that's being done in this  
4 case?

5 A. Okay. I understand. Would you now repeat the  
6 question, please?

7 Q. So Rembrandt acquired the patents before the  
8 arrangement with you was worked out for your consulting  
9 arrangement in this case; isn't that true?

10 A. Yes.

11 Q. And so far in this case, you've received some  
12 upfront payments with respect to your consulting work on  
13 this case; is that right?

14 A. Yes.

15 Q. Okay. We saw several payments. I think it totaled  
16 \$150,000; is that right?

17 A. Yes.

18 Q. And in total, your work with Rembrandt -- you had  
19 mentioned in all of your consulting work, you've made  
20 about \$675,000; is that correct?

21 A. Yes.

22 Q. And in addition to the \$150,000 that you received  
23 with respect to your consulting work in this case so  
24 far, you also have an arrangement where you get  
25 2-1/2 percent of whatever Rembrandt collects from this

1 litigation; isn't that right?

2 A. Yes, it is.

3 Q. And the reason you wanted a 2-1/2 percent interest  
4 in the outcome of this case, that was because at the  
5 time you were negotiating this, you didn't think your  
6 billing rate was enough to get you to work with  
7 Rembrandt; is that right?

8 A. No.

9 Q. You needed something more than just your hourly  
10 rate to work on this case; isn't that true?

11 A. I --

12 Q. And you wouldn't cooperate with Rembrandt. I  
13 didn't mean to interrupt you. I'm sorry.

14 A. No.

15 THE COURT: Let's move along. Ask your next  
16 question.

17 MR. HADDAD: Yes, Your Honor.

18 Q. (By Mr. Haddad) Can you turn to Column -- Page 216  
19 in Volume -- let me see what volume it is. That's  
20 Page 216 in Volume 1 of your transcript.

21 A. Is that the volume --

22 Q. The thicker one.

23 A. -- dated 2014/10/16?

24 Q. Yes, Mr. Bremer.

25 A. Okay. What was the page, please?

1 Q. Page 216.

2 MR. ALAVI: Your Honor, I'm going to object to  
3 improper impeachment and ask that counsel not show the  
4 transcript until he's laid the foundation for showing  
5 the transcript to the witness on the ELMO which he's  
6 just put up.

7 THE COURT: Overruled.

8 Let's proceed.

9 Q. (By Mr. Haddad) Mr. Bremer, were you asked at your  
10 deposition at Page 216 -- Page 216, Line 11, the  
11 question was: So Rembrandt -- so Rembrandt paid you at  
12 the beginning of this lawsuit because it wanted your  
13 cooperation?

14 And you answered: Yeah. I mean, you know, I'm  
15 basically retired, whereas I used to consult, as I  
16 explained. I don't have a lot of interest in just  
17 getting consulting money anymore on an hourly basis.  
18 So, you know, for me to dig in and to help, I needed  
19 something more than that.

20 Do you remember that answer?

21 A. Yes, I do.

22 Q. So is that why you negotiated a percentage of the  
23 outcome of this litigation in order to work with  
24 Rembrandt?

25 A. I had an attorney that negotiated.

1 Q. And did you ask that attorney to negotiate the best  
2 deal he could -- he could negotiate, strike the best  
3 deal he could negotiate?

4 A. Yes.

5 MR. ALAVI: Objection, Your Honor, privilege.

6 MR. HADDAD: Your Honor, it was the question  
7 that was asked at a deposition. No -- no -- no  
8 objection was made. I have the next question on the  
9 same page, Your Honor.

10 THE COURT: Well, you're not going to go into  
11 their discussions.

12 MR. HADDAD: No, Your Honor. That's just the  
13 question.

14 THE COURT: All right. Then I'll overrule the  
15 objection. Restate the question, and the witness will  
16 answer it.

17 Q. (By Mr. Haddad) Mr. Bremer, you hired an attorney  
18 to negotiate with Rembrandt; is that correct?

19 A. Yes, I did.

20 Q. And you asked him to strike the best deal he could  
21 get; isn't that true?

22 A. Yes.

23 Q. And, Mr. Bremer, you don't know whether the '580  
24 patent covers Bluetooth; is that correct?

25 A. I -- that's right. I don't. I don't know.

1 Q. And you don't know whether the '228 patent, the  
2 other patent in this case, covers Bluetooth; is that  
3 correct?

4 A. That's right.

5 Q. And you also -- you don't know whether either the  
6 '580 or the '228 patents -- you don't know whether they  
7 cover the EDR feature of Bluetooth. Isn't that a fact?

8 A. I'm not a patent attorney to answer -- answer those  
9 questions positively.

10 Q. Okay. So the answer is you don't know, correct?

11 A. I don't know.

12 Q. Okay. And the earlier patents that were issued in  
13 the chain of patents in this -- that relates to the two  
14 patents in this case, the parent applications, you don't  
15 know whether those ones -- the '838 patent and the '262  
16 patent and the '965 patent, you don't know whether they  
17 cover Bluetooth either, do you?

18 A. No.

19 Q. All right. You started in the area of selling  
20 patents when you were working for Paradyne; is that  
21 true?

22 A. I analyzed Paradyne's patents and made  
23 recommendations.

24 Q. And then you would, on -- on Paradyne's behalf, you  
25 would contact potential buyers of Paradyne's patents;

1 isn't that true?

2 A. I don't recall.

3 Q. At some point, the company you were working for,  
4 Paradyne, it was acquired by Zhone, correct?

5 A. Yes.

6 Q. And eventually, you decided to -- to leave Zhone;  
7 is that right?

8 A. Yes.

9 Q. And at that point, your work wasn't really in  
10 technology anymore; your work was more involved with  
11 patents; is that correct?

12 A. Partially.

13 Q. And --

14 A. Perhaps you could -- could you divide that into two  
15 questions, please? I believe there were two questions  
16 there.

17 THE COURT: Mr. Bremer, if you don't  
18 understand the question, say you don't understand the  
19 question. But you're there to answer questions, not to  
20 ask Counsel questions.

21 THE WITNESS: Okay. Thank you. Thank you.

22 A. Yes, I don't understand the question.

23 THE COURT: Let's move forward.

24 Q. (By Mr. Haddad) And after you left Paradyne, you  
25 worked for Rembrandt for several years, correct?



1 A. Yes.

2 Q. And during those years you were consulting with  
3 Rembrandt, you were investigating whether there were  
4 possible targets to assert patents against; is that  
5 right?

6 A. Yes.

7 Q. I'd like you to turn to in the -- in the binder,  
8 this -- this thicker white binder, Mr. Bremer, the  
9 document marked DX-1104.

10 MR. HADDAD: I don't know if we can bring that  
11 up on the screen, or should I use the ELMO?

12 Q. (By Mr. Haddad) Okay. Figure 8 of that patent,  
13 which is several pages in.

14 A I see it. Yes.

15 Q. Thank you, Mr. Bremer.

16 You're aware -- have you seen this patent before?

17 A Yes, I have.

18 Q. And this was the continuation-in-part patent where  
19 this figure, Figure 8, was added to this -- to this  
20 patent application, wasn't it?

21 A Yes. Yes, that's true.

22 Q. And this figure was not in your original patent;  
23 isn't that right?

24 A I believe so.

25 Q. Do you need to check?

1           The '838 patent, the first patent that issues,  
2 Figure 8 was not in there?

3       A     Let me take a minute.

4       Q.     Sure.

5       A     I want to make sure that I'm correct.

6       Q.     That's in your binder, DX-1103.

7       A     Yes. It's not in the original patent, you're  
8 right.

9       Q.     So Figure 8 was added to this 2003 application,  
10 right?

11      A     Yes.

12      Q.     And Figure 8 shows a system -- if you look at the  
13 top of Figure 8, it shows a system with a master that  
14 speaks both Type A and Type B modulation methods,  
15 correct?

16      A     Yes, I see that.

17      Q.     And shows a -- what's labeled as a trib that speaks  
18 both Type A and Type B, correct?

19      A     Yes.

20      Q.     And you understand that this figure, Figure 8, was  
21 deleted from the '580 patent, the patent that's at issue  
22 in this case.

23            You understand that, right?

24      A     I believe so. My recollection was that it was  
25 deleted.

1 Q. Do you need -- if you'd like to check it, it's in  
2 your book.

3 A That's not necessary. I remember.

4 Q. Figure 8 was deleted, correct?

5 A Yes.

6 Q. Figure 8 was deleted, correct?

7 A Yes.

8 Q. Yes. And -- and it was a surprise to you to learn  
9 that Figure 8 was -- was added to your patent  
10 application back when the application was filed for the  
11 '626 patent; isn't that right?

12 A Would you repeat that question, please?

13 Q. It was surprising for you to learn that Figure 8  
14 was added to your 2003 patent application; isn't that  
15 true?

16 A I don't recall.

17 Q. If you could turn to -- in your transcript from the  
18 same date that we were looking at before, October 16th,  
19 2014, Page 242.

20 A Please -- would you repeat?

21 Q. I'm sorry. The bigger transcript. There are two  
22 transcripts, I know. It's the bigger of the two.  
23 October 16, 2014.

24 A Okay.

25 Q. I'm sorry. I got the wrong transcript. We'll move

1 on.

2 Now, Mr. Bremer, earlier today, we heard Mr. Ward  
3 say and tell the jury that battery life is an important  
4 part of your invention. There's absolutely nothing in  
5 your patents about battery life, isn't that correct?

6 The '580 patent or the '228 patent, they don't talk  
7 about battery life, correct?

8 A I would have to read -- reread the patents. I -- I  
9 don't recall.

10 Q. You don't remember, as you sit here today, whether  
11 battery life is mentioned at all in the '580 patent or  
12 the '228 patent?

13 A I don't recall if the exact term "battery life" is  
14 in those patents.

15 Q. And in the slide that you used a little while ago  
16 with the attorneys for Rembrandt, you were showing two  
17 mobile devices communicating with each other when you  
18 were describing modems.

19 Do you remember that?

20 A Yes, I do.

21 Q. And in your patents, the '580 patent or the -- and  
22 the '228 patent, there's no disclosure of mobile devices  
23 in there.

24 That's true, isn't it?

25 A I don't recall.

1 Q. You don't remember.

2 Were there any -- any disclosure of mobile phones,  
3 any kind of mobile device in either of your two patents?

4 A I don't recall.

5 Q. I'd like to just go back to when I asked you the  
6 question about Figure 8 being a surprise.

7 THE COURT: Mr. Haddad, don't tell him what  
8 you want to talk about.

9 MR. HADDAD: Okay.

10 THE COURT: Just ask the question.

11 Q. (By Mr. Haddad) Sir, I'd like you to turn to  
12 Page 242 of your transcript from the October 17th  
13 transcript of your deposition.

14 A Please repeat the page.

15 Q. Page 242.

16 A I see the page.

17 Q. Okay. It's up on your screen now also. You see  
18 the question?

19 It says: Would it surprise you to learn that  
20 Figure 8 was first added -- Figure 8 we've been looking  
21 at was first added in 2003?

22 And your answer on October 17th was that: Yes, I  
23 guess it would.

24 A Well, I need to read the whole thing in context  
25 here.

1 Q. Please go ahead.

2 A Yeah. So...

3 THE COURT: Gentlemen, we need to move on.  
4 We're not going to wait here all afternoon while you  
5 reread the deposition. Ask your question again and  
6 let's give the -- the best answer you can give and let's  
7 move on.

8 Counsel, reask your question.

9 Q. (By Mr. Haddad) Mr. Bremer, were you surprised that  
10 Figure 8 was added to your patent application in 2003?

11 A Well, I'll go from what I said in the deposition  
12 was that, yes, I guess it would.

13 Q. Thank you.

14 I want to go back to some of the testimony you gave  
15 a little earlier when counsel for Rembrandt was asking  
16 you a few questions.

17 You mentioned --

18 THE COURT: Mr. Haddad, I just told you don't  
19 tell him what you're going to ask him. Just ask the  
20 questions. You're making sidebar comments in the  
21 presence of the jury, and that's not permissible.

22 MR. HADDAD: I'm sorry, Your Honor.

23 THE COURT: Okay. Ask your question.

24 Q. (By Mr. Haddad) The -- the work that you mentioned  
25 earlier today that you did at Honeywell that resulted in

1 a product that was used in the Army, I believe you said,  
2 that has nothing to do with the -- with the patents that  
3 are at suit today; is that correct?

4 A Yes.

5 Q. And the work you did at Paradyne in 1974 that you  
6 mentioned in your testimony earlier today, that has  
7 nothing to do with the patents-in-suit today; is that  
8 correct?

9 A Yes.

10 Q. And --

11 THE COURT: Yes, it does, or yes, it doesn't.  
12 What's --

13 MR. HADDAD: I'm sorry?

14 THE COURT: What's the answer, Mr. Bremer?

15 A Please ask the question.

16 Q. (By Mr. Haddad) Okay. It's -- isn't it true that  
17 the work you did at Paradyne in 1974 that you mentioned  
18 earlier today, that work has nothing to do with the  
19 patents-in-suit in this case?

20 A It has nothing to do with the patents-in-suit.

21 Q. And that patent -- that -- that product that you  
22 worked on at Paradyne in 1974, that turned into a  
23 product, didn't it?

24 A Yes, it did.

25 Q. And the work you did at Honeywell, that turned into

1 a product, didn't it?

2 A Yes, it did.

3 Q. But the work you did at Paradyne that led to the  
4 patents-in-suit here today, that never led to an actual  
5 product that Paradyne put into production; isn't that  
6 true?

7 A Yes, that's true.

8 Q. So I just want to point out -- if you can turn to  
9 the binder at Exhibit PX-007, the binder that your  
10 attorneys gave you.

11 This was your tech note that you mentioned earlier  
12 today, correct?

13 A Yes, it is.

14 Q. All right. And I highlighted a sentence, you can  
15 see in yellow on the screen. It says: If patentable,  
16 this may offer Paradyne a strong competitive advantage.

17 Do you see that?

18 A Yes, I do.

19 Q. And this patent never resulted in a product, so it  
20 never resulted in a strong competitive advantage to  
21 Paradyne; isn't that true?

22 A Yes, that's true.

23 Q. And earlier today, there were a whole list of  
24 awards that were put up on the screen that you've  
25 received. Those awards have nothing to do with the



1 patents-in-suit; isn't that right?

2 A That's right.

3 Q. And you had mentioned -- you were describing modems  
4 to the jury. You did not invent modems, correct?

5 A Yes, that's correct.

6 Q. And there were a few pieces of technology that are  
7 mentioned in your patent that you didn't invent.

8 For example, you didn't invent master/slave  
9 communications; isn't that true?

10 A I believe that's true.

11 Q. And you didn't invent polling, correct?

12 A That's true.

13 Q. And you didn't invent multipoint communications;  
14 isn't that true?

15 A That's true.

16 Q. And you didn't invent any of the modulation methods  
17 that are mentioned in your patents, correct?

18 A I --

19 Q. I can --

20 A I guess I'd have to --

21 Q. I can list them for you. I'll make it easier.

22 Just to be clear, you didn't invent the QAM modulation  
23 method, Q-A-M, correct?

24 A That's right.

25 Q. And you didn't invent the FSK modulation method,

1 correct?

2 A Correct.

3 Q. And you didn't invent DMT modulation; is that  
4 correct?

5 A Yes.

6 Q. And you didn't invent the other modulations, like  
7 PAM modulation, PSK, or PPM; isn't that true?

8 A Yes.

9 MR. HADDAD: Thank you, Mr. Bremer.

10 THE COURT: Do you pass the witness, Counsel?

11 MR. HADDAD: (No response.)

12 MR. HADDAD: Do you pass the witness, Counsel?

13 MR. HADDAD: Yes, Your Honor.

14 THE COURT: Redirect by the Plaintiff?

15 MR. ALAVI: No redirect, Your Honor.

16 THE COURT: All right. Mr. Bremer, you may  
17 step down.

18 THE WITNESS: Thank you.

19 MR. ALAVI: And, Your Honor, I believe the  
20 witness should leave the exhibits; is that correct?  
21 Some of them may be confidential.

22 THE COURT: He didn't bring them with him, did  
23 he?

24 MR. ALAVI: No, he didn't, Your Honor.

25 THE COURT: Okay. Turn them back over to your

1 counsel.

2 THE WITNESS: I have to leave now, right?

3 THE COURT: Does this witness wish to be  
4 excused, or is he to be retained?

5 MR. ALAVI: He may be retained in the event  
6 that the other side wants to call him in their case.

7 THE COURT: All right. Then -- then he has  
8 not been excused.

9 MR. ALAVI: Thank you, Your Honor.

10 MR. SHERWOOD: Your Honor, we're not going to  
11 call him.

12 MR. ALAVI: Okay. Then he can be excused,  
13 Your Honor.

14 THE COURT: Does Defendant object to this  
15 witness being excused?

16 MR. SHERWOOD: No, Your Honor.

17 THE COURT: Okay. Mr. Bremer, you have been  
18 excused. You may stay and observe or you may leave.  
19 It's up to you.

20 THE WITNESS: Thank you.

21 THE COURT: All right. Counsel, we're going  
22 to take a short recess.

23 Ladies and gentlemen, you may leave your  
24 notebooks in your chairs.

25 Don't discuss anything about the case. Take a

1 minute to stretch your legs and get a drink of water,  
2 and then we'll have you back in here and continue with  
3 the next witness.

4 You're excused for recess at this time.

5 COURT SECURITY OFFICER: All rise for the  
6 jury.

7 (Jury out.)

8 THE COURT: All right. We stand in recess.

9 I want to see Mr. Smith and Mr. Ward in  
10 chambers, please.

11 COURT SECURITY OFFICER: All rise.

12 (Recess.)

13 COURT SECURITY OFFICER: All rise.

14 THE COURT: Be seated, please.

15 MR. SHERWOOD: Your Honor, may I ask one  
16 question?

17 THE COURT: What's that, Mr. Sherwood?

18 MR. SHERWOOD: Is it the rule of the Court  
19 that while a witness's testimony is pending, nobody  
20 speaks to the witness with respect to the testimony? Is  
21 that the rule of this Court, is what I'm asking.

22 THE COURT: No, that's not the rule of the  
23 Court.

24 MR. SHERWOOD: I see. Okay.

25 THE COURT: Can you give me a specific context

1 you're concerned about?

2 MR. SHERWOOD: Well, I'm not concerned about  
3 anything. I just want to understand the practice. So  
4 if the witness's testimony starts on day one but doesn't  
5 conclude and --

6 THE COURT: He's not sequestered overnight.

7 MR. SHERWOOD: I see. Thank you, Your Honor.

8 THE COURT: All right. All right. Let's  
9 bring in the jury, please.

10 COURT SECURITY OFFICER: All rise for the  
11 jury.

12 (Jury in.)

13 THE COURT: Please be seated.

14 Plaintiffs, call your next witness.

15 MR. ENGER: Your Honor, the Plaintiffs call  
16 Dr. Robert Morrow.

17 THE COURT: All right. Dr. Morrow, you've  
18 been sworn?

19 THE WITNESS: Yes, sir, I have.

20 THE COURT: Please come around and have a  
21 seat.

22 All right. Counsel, you may proceed.

23 ROBERT "BOB" MORROW, JR., Ph.D., PLAINTIFF'S WITNESS,

24 PREVIOUSLY SWORN

25 DIRECT EXAMINATION

1 BY MR. ENGER:

2 Q. Good afternoon.

3 Could you please tell the jury your name?

4 A. My name is Dr. Robert Kendall Morrow, Jr., but I go  
5 by Bob.

6 Q. Dr. Morrow, have you been hired by Rembrandt to be  
7 an expert in this case?

8 A. I have.

9 Q. And have you prepared a presentation to assist you  
10 with your testimony today?

11 A. Yes, I have. I've prepared a number of slides to  
12 help me testify.

13 Q. Dr. Morrow, what technologies does this -- does  
14 this case involve?

15 A. This case involves Bluetooth technology.

16 Q. And what experience do you have with Bluetooth?

17 A. Well, as you can see on the slide, I've got over  
18 15 years' experience with it. I was actually working  
19 with it just after it came out in 1999.

20 I've written two books. One is called Bluetooth:  
21 Operation and Use, so it's devoted exclusively to  
22 Bluetooth. And then a second book, Wireless Network  
23 Coexistence, which has major sections of Bluetooth in  
24 it.

25 Q. Dr. Morrow --

1 MR. ENGER: Permission to approach the -- the  
2 witness, Your Honor?

3 THE COURT: Yes.

4 Q. (By Mr. Enger) Are those the two books that you've  
5 written on Bluetooth, Dr. Morrow?

6 A. Yes, they are. These are the two books.

7 Q. And what's the title of the first one?

8 A. The title of the first one is Bluetooth: Operation  
9 and Use.

10 Q. And how many pages are in that book?

11 A. There's 567 pages in this one.

12 Q. And your other book also deals with Bluetooth?

13 A. The other book has Bluetooth in it -- it's called  
14 Wireless Network Coexistence.

15 Q. Dr. Morrow, tell us about some of the other  
16 Bluetooth experience that you have.

17 A. Well, some of the other experience I have, I've  
18 taught courses on Bluetooth to commercial and government  
19 clients over the years.

20 You know, engineers really need to understand the  
21 latest technology, so I have some classes that are two  
22 to five days in length and teach these people the newest  
23 and latest and greatest that's out there.

24 I also consult for companies like Broadcom, IBM,  
25 Ford, Motorola, and Toyota.

1 Q. Dr. Morrow, with that background in mind, tell us a  
2 little bit about where you're from.

3 A. Well, I -- I grew up in Southern California right  
4 near Disneyland. I actually watched it being built.  
5 During the years, I've lived all over the United States,  
6 including Lubbock and San Antonio, and I've lived in  
7 Indiana, back to California, Colorado, and Mississippi.

8 Q. And where do you live now, sir?

9 A. I live now on a small farm in East Central Indiana.

10 Q. Are you married?

11 A. I am.

12 Q. How long have you been married?

13 A. Almost 35 years.

14 Q. Do you have any children?

15 A. I have one daughter, who's now grown.

16 Q. What education have you had since high school?

17 A. Well, since high school, I -- I graduated with a  
18 bachelor's in electrical engineering from the U.S. Air  
19 Force Academy with honors in 1974.

20 1982, I graduated from Stanford University with a  
21 master's degree in electrical engineering.

22 And in 1988, I graduated from Purdue University  
23 with a Ph.D. degree in electrical engineering.

24 Q. What was the technical focus of your studies?

25 A. My studies focused technically on wireless



1 communications.

2 Q. And when did you first express interest in these  
3 wireless communications?

4 A. Oh, just about as long as I can remember. I think  
5 my interest really started to solidify when I was in Boy  
6 Scouts. We used to use those little walkie-talkies.  
7 You probably remember those. Oh, I loved those things.

8 Q. Dr. Morrow, what do we see here?

9 A. Oh, in the upper left, that gray box you see with  
10 that big telephone hanging out of it, that's a wireless  
11 transceiver, a transmitter/receiver that I built when I  
12 was about 15.

13 In the box on the lower right, that's a little  
14 thing. You can see the pencil and put it in  
15 perspective. That thing has two wireless transmitters  
16 in it. I also built that when I was about 15.

17 Q. Dr. Morrow, what did you do after college?

18 A. Well, after I graduated from the United States Air  
19 Force Academy, I entered the Air Force as an officer,  
20 and I was an instructor pilot and an electrical  
21 engineering professor and administrator.

22 Q. And what do we see here?

23 A. Yeah. That -- that brings back some memories.  
24 That is one of the Air Force airplanes I flew at the  
25 Air Force Academy.

1 I had the best of both worlds there. I could fly  
2 that airplane -- that happy guy was me, by the way. I  
3 could fly that airplane in the morning, and then in the  
4 afternoon, I could go up and teach electrical  
5 engineering at the university level.

6 Q. Well, tell us about that work that you did as an  
7 electrical engineering professor.

8 A. Well, as an electrical engineering professor, I  
9 first started at the U.S. Air Force Academy in 1982,  
10 shortly after getting a master's degree.

11 I was promoted to chief of the Computer Engineering  
12 Division in the Department of Electrical Engineering at  
13 the academy in 1988.

14 I was promoted again to be the Director of Research  
15 in 1990. As Director of Research, I managed the  
16 research programs of about 700 students and faculty at  
17 the Air Force Academy.

18 And then I was promoted to be the Deputy Head of  
19 the Electrical Engineering Department at the Air Force  
20 Institute of Technology in 1992. That was the largest  
21 department at the Air Force graduate school at the time.

22 Q. Have you been awarded any patents for the work that  
23 you did while in the military?

24 A. Well, I have. I've been awarded a patent in  
25 spread-spectrum packet radio, which is similar to the

1 technology in Bluetooth.

2 Q. Have you received any other awards for your  
3 service?

4 A. Well, one award I received -- I guess it's  
5 multiple -- is three meritorious service medals,  
6 specialized Air Force medal for performance of duty, and  
7 two commendations medals at the United States Air Force.  
8 And finally, I was -- I was selected as officer of the  
9 year.

10 Q. Dr. Morrow, are you still in the military today?

11 A. I'm not. I actually retired in 1994.

12 Q. And what was your rank at the time?

13 A. My rank was lieutenant colonel.

14 Q. What do you do now?

15 A. Well, now I'm president of a company called Morrow  
16 Technical Services that I started right after I retired  
17 from the Air Force.

18 Q. Give us a preview of some of the work that you do  
19 at Morrow Technical Services.

20 A. Well, I would say probably the most prominent work  
21 I do is I teach those wireless courses I talked about in  
22 the past, those two- to five-day courses that bring  
23 engineers up to speed on the latest technology.

24 I also write books, papers, and articles. A little  
25 bit of an odd thing, I'm a manufacturer, designer, and

1 seller of optical collimation tools for astronomy  
2 telescopes. Sort of been a hobby of mine for years.

3 And then finally, I also participate as an expert  
4 witness in cases like this today.

5 Q. Dr. Morrow, back to the first point, the teacher of  
6 the wireless courses. You mentioned that some of those  
7 relate to Bluetooth. Do any of them relate to Bluetooth  
8 EDR?

9 A. Well, absolutely. Ever since Bluetooth EDR came  
10 out in 2004, I've put that important technology into my  
11 classes.

12 Q. And how many papers and articles have you written?

13 A. About 40 altogether. Some of them have been  
14 published in the Institute of Electrical and Electronics  
15 Engineers, which is a -- a rather prestigious society.  
16 They're called IEEE, for short, IEEE.

17 Q. Are you a member of any professional organizations?

18 A. Well, I am. I'm a senior member of the IEEE.

19 I'm also life members of the Armed Forces  
20 Communications and Electronics Association. Military  
21 always has abbreviations for everything. That's called  
22 AFCEA.

23 And I'm also a lifetime member of Air Force  
24 Association.

25 Q. Dr. Morrow, are you an expert in electrical

1 engineering field of communication networks, and in  
2 particular, Bluetooth?

3 A. Yes, I am.

4 MR. ENGER: Your Honor, I offer Dr. Morrow as  
5 an expert in the areas of communication networks and  
6 Bluetooth.

7 THE COURT: Is there objection?

8 MR. SHERWOOD: No, Your Honor.

9 THE COURT: All right. He'll be accepted as  
10 an expert witness.

11 Proceed, Counsel.

12 Q. (By Mr. Enger) Dr. Morrow, what has been the scope  
13 of your activities as an expert in this case?

14 A. Well, I was asked to analyze the asserted patent  
15 claims and then take Samsung products and analyze the  
16 products with respect to the claims and then determine  
17 whether or not I thought there was infringement.

18 Q. And what conclusion did you reach about  
19 infringement?

20 A. The conclusion I reached is that Samsung, indeed,  
21 infringes upon the patents-in-suit.

22 Q. What are the asserted claims for Mr. Bremer's  
23 patents in this lawsuit?

24 A. Well, the '580 patent, which we've already seen,  
25 the asserted claims are Claims 2 and 59. In the '228

1 patent, the asserted claim is Claim 21.

2 Q. And what are the model numbers of Samsung's  
3 infringing products?

4 A. I apologize for how busy this slide is. There are  
5 a lot of products on the slide, over 400 altogether.  
6 They range from computers to televisions to tablets to  
7 cell phones to wireless speakers, cameras, and headsets.

8 Q. Dr. Morrow, where did you get this listing of  
9 infringing products?

10 A. This list was actually provided by Samsung in  
11 response to questions asked by the attorneys.

12 Q. And that was Plaintiff's Exhibit 69?

13 A Yes, it is.

14 Q. What evidence did you look at to determine that  
15 Samsung's products infringe?

16 A I looked at quite a bit of evidence. The first on  
17 the list is I looked at the Bluetooth specification.

18 Q. Dr. Morrow, what is a Bluetooth specification?

19 A A Bluetooth specification is a big document. I  
20 think someone's already held one up. It's a big thick  
21 thing, over 1200 pages in one of the specifications, and  
22 that explains precisely how Bluetooth works.

23 Q. Dr. Morrow --

24 MR. ENGER: I'm sorry. Your Honor, permission  
25 to approach the witness with the first exhibits, the

1 Bluetooth specifications?

2 THE COURT: You may approach the witness.

3 MR. ENGER: Mr. Larson, please, Box 1.

4 MR. LARSON: Your Honor, may I approach?

5 THE COURT: You may.

6 Q. (By Mr. Enger) Dr. Morrow, could you please look in  
7 that first box and tell us if you see any of the  
8 Bluetooth specifications that you just discussed?

9 A Sure.

10 Yes. In this box, I see four of the Bluetooth  
11 specifications that we just discussed.

12 Q. And with respect to your infringement analysis, do  
13 any of those Bluetooth specifications differ in any  
14 material way?

15 A With respect to infringement analysis, no, they  
16 don't.

17 Q. All right.

18 MR. ENGER: Permission to approach and bring  
19 up the second box, Your Honor?

20 MR. SHERWOOD: Your Honor, may we know what  
21 exhibit numbers these are?

22 MR. ENGER: Plaintiff's Exhibits 1 through 2,  
23 23 through 24, I believe.

24 THE COURT: All right. Bring the second box  
25 forward.

1 Counsel, approach the bench.

2 (Bench conference.)

3 MR. ENGER: Yes, Your Honor.

4 THE COURT: Wait until both sides get here.

5 All right. Do y'all have questions about what  
6 we're doing? We don't need to be asking questions in  
7 front of the jury. Can you identify what's in each box  
8 with specificity?

9 MR. ENGER: I will, yes, Your Honor. Is this  
10 the approach you want me to follow getting these into  
11 evidence?

12 THE COURT: Well, I wanted to -- I don't want  
13 Mr. Sherwood to stand up and ask.

14 MR. SHERWOOD: He said they were all the same,  
15 and I don't know what he's talking about.

16 THE COURT: The purpose of this exercise is to  
17 get the record clear, so try to be as specific as you  
18 can.

19 MR. ENGER: I understand. Thank you, Your  
20 Honor.

21 THE COURT: All right. Let's proceed.

22 (Bench conference concluded.)

23 THE COURT: All right. Mr. Enger, you may  
24 proceed.

25 MR. ENGER: Do we have the second box



1 available?

2 Q. (By Mr. Enger) Dr. Morrow, what do you see in the  
3 second box of documents?

4 A The second box are additional Bluetooth  
5 specifications, plus some of the documents called PICS.

6 Q. And what are the Plaintiff's exhibits of that box,  
7 please?

8 A Looks like we have Plaintiff's Exhibit 26, Parts --

9 Q. Part 2, and in Plaintiff's Exhibit 27, Part 1 and  
10 2?

11 A That's correct.

12 Q. Okay. Thank you, Dr. Morrow.

13 I'd like to ask you now about the next piece --  
14 pieces of evidence that you considered in forming your  
15 opinions. What other evidence did you consider?

16 A Well, another piece of evidence I considered were  
17 called Bluetooth Protocol Implementation Conformance  
18 Statements, long word. We just call it PICS for short.  
19 You've heard that term before as well.

20 Those are documents that Samsung fills out on every  
21 product they make that conforms to Bluetooth, and they  
22 assert that various parts of the Bluetooth  
23 specifications have been upheld by the products.

24 Q. Dr. Morrow, do you see any of the Bluetooth  
25 Protocol Implementation Conformance Statements in Box 2?

1 A I do.

2 Q. And what are those Plaintiff's Exhibits? 350  
3 through 357, correct?

4 A Let's see. We have some interrogatories here. Let  
5 me just check.

6 We start with Plaintiff's Exhibit 42.

7 Q. Dr. Morrow, do you see Plaintiff's Exhibit 350 to  
8 357?

9 A Here we go. Yes. Yes, I do.

10 Q. All right. Are there any other -- besides 350 to  
11 357, are there Bluetooth PICS that you looked at?

12 A Yes. In fact, the Plaintiff's exhibits go all the  
13 way up to 664. That's a lot of documentation.

14 Q. You looked at all the Bluetooth Protocol  
15 Implementation Conformance Statements, PICS, from  
16 Plaintiff's Exhibit 350 to 664?

17 A I did.

18 Q. And was there any material differences with respect  
19 to your infringement opinions with respect to those  
20 exhibits?

21 A No.

22 Q. All right. Dr. Morrow, what other evidence did you  
23 consider?

24 A I also considered the evidence from my Bluetooth  
25 test results.

1 Q. Explain to us what your Bluetooth test results are.

2 A Well, this is something I always enjoyed where you  
3 actually get to get in the lab and make things happen.

4 I worked with a Bluetooth test facility, and we set  
5 up testing to see if the Samsung products actually did  
6 by turning them on and making them work, if they  
7 actually did what they were supposed to do regarding  
8 Bluetooth.

9 Q. What other categories of evidence did you consider,  
10 Dr. Morrow?

11 A I also looked at something called source code.

12 Q. What is source code?

13 A Source code is the computer instructions that  
14 actually run that little Bluetooth chip inside the  
15 Samsung product.

16 Q. And tell us about other evidence that you  
17 considered.

18 A Well, I looked at product documentation. This  
19 documentation comes from various -- various products  
20 that have instruction manuals, how they work, and I  
21 looked at several of those as well.

22 Q. And is the source code and product documentation  
23 that you considered Plaintiff's Exhibits 665 through  
24 751, 756 through 777, 779 through 806, 809 through 813,  
25 815 through 819, and 822 through 825?

1 A That is correct.

2 Q. What other kind of evidence did you consider?

3 A I also considered deposition testimony. You've  
4 heard some of that testimony already, but I read  
5 deposition testimony from some Samsung employees that  
6 were asked questions about how their products  
7 implemented Bluetooth.

8 Q. What other evidence did you consider?

9 A I also looked at Samsung's discovery responses.  
10 Those are responses to written questions that the  
11 attorneys provided to Samsung. Samsung responds to  
12 those also in writing, and I read those.

13 And I also looked at Samsung's internal documents.  
14 Those are documents within the company that they  
15 generate lots and lots of documentation about these  
16 products.

17 Q. And was the discovery responses you reviewed and --  
18 and relied upon Plaintiff's Exhibits 42 through 43, 45,  
19 63, 68 through 69, and 72?

20 A That's correct.

21 Q. And the internal documents you relied upon are  
22 Plaintiff's Exhibits 73, 78 through 79, and 238?

23 A Correct.

24 Q. Dr. Morrow, was -- this evidence that you  
25 considered, was it enough to show you that Samsung's

1 products infringe?

2 A It was more than enough. Actually, I had  
3 everything I needed to -- to come to that conclusion.

4 Q. Do you have any unanswered questions today about  
5 whether Samsung's products infringe?

6 A Not at all.

7 Q. Generally speaking, what are Mr. Bremer's patents  
8 about?

9 A Well, Mr. Bremer's patents, the '580 and the '228,  
10 are there to make communication devices work better,  
11 faster, and cheaper.

12 Q. And how do Mr. Bremer's patents do that?

13 A They do it by seamless communication using  
14 different types of modulation.

15 Q. Now, you just used some words that I expect are  
16 foreign to us. What are communication devices?

17 A Well, communication devices are just devices that  
18 send or receive information. That's all it is.

19 Q. What do we see here, Dr. Morrow?

20 A So what we see here is the phone on the left is  
21 sending information across some kind of communication  
22 path to the headset on the right.

23 Q. How do communication devices send and receive  
24 information?

25 A Well, you've heard the term "modem" before.

1 Remember, that was modulator/demodulator. So these  
2 communication devices all have these little modems  
3 inside that perform that communication that make it  
4 happen.

5 Q. And tell us what we see here, Dr. Morrow.

6 A Well, what I see is some information coming from  
7 the cell phone on the left, entering a modem. The modem  
8 turns that into a modulated wave that then goes into the  
9 modem on the right. The modem on the right demodulates  
10 that information and in it goes to the headset.

11 Q. Is there just one type of modulation?

12 A No. There are actually several different types of  
13 modulation.

14 Q. Do you have any analogies that would help us better  
15 understand the types of modulation?

16 A. Well, you've seen this before, and that's the  
17 language analogy. Types of modulation are like speaking  
18 different types of language.

19 For example, here are two people speaking English.  
20 How are you? I am fine.

21 So what we do is we take a type of language and  
22 kind of match it. It's sort of a matching game, just  
23 for an analogy, to a type of modulation.

24 So in this case, if you look underneath, you'll see  
25 there are some blue squiggly lines. That's one type of

1 modulation that we'll just call English by analogy.

2 Q. What do we see here, Dr. Morrow?

3 A. Well, here we see two people speaking Chinese, a  
4 different type of language, which we represent by the  
5 Chinese flag. At the bottom, you'll see a different  
6 type of modulation represented also by the Chinese flag,  
7 holding up our language analogy.

8 Q. And what are some examples of different types of  
9 modulation that we may be familiar with?

10 A. You've heard this before, the AM and FM radio.  
11 Well, an AM radio, for example, takes a wave, and  
12 depending upon the information, it changes the amplitude  
13 of the wave, which is just the height.

14 So, for example, if the information is low, which  
15 is 000, the wave is sort of short. And if the  
16 information is high, 111, the wave is tall. So the wave  
17 changes with respect to the information.

18 FM works differently. If you notice here, the  
19 waves all stay the same height, but instead, we're  
20 changing the frequency, which is the distance between  
21 the peaks of the signal.

22 So we see when the information is low, the peaks  
23 kind of spread out, the frequency drops. As the  
24 information is high, the wave gets squished together, so  
25 the frequency is higher.

1 Q. Well, why do we have different types of modulation?

2 A. Well, the different types of modulation give an  
3 engineer a chance to pick a type that works best in the  
4 application that that engineer is working on. So, for  
5 example, using our AM/FM analogy, you can see the  
6 balance going.

7 An engineer might pick AM because it's cheap, but  
8 you probably remember, if you turn your AM radio on,  
9 it's sort of noisy sometimes. So that's why you hear  
10 voice on AM radio a lot more than music.

11 On the other hand, FM is a little more expensive,  
12 but FM is much clearer when it comes to music and why  
13 most of the music is on the FM band.

14 THE COURT: Dr. Morrow, could you slow down  
15 just a little bit?

16 THE WITNESS: Yes, Your Honor.

17 THE COURT: You're speaking a little bit fast.

18 THE WITNESS: I'm excited.

19 THE COURT: Well, try to slow down.

20 Go ahead, Counsel.

21 THE WITNESS: I will.

22 Q. (By Mr. Enger) Before Mr. Bremer's patents, how did  
23 communication devices use modulation to send and receive  
24 information on a network?

25 A. Before Mr. Bremer's patents came along, devices



1 used only one type of modulation, as shown in the slide.

2 Q. And what do we see here, Dr. Morrow? Is this  
3 Figure 1 from the patents?

4 A. Yes. This is Figure 1 prior art. This is how  
5 things had been done. We see a master transceiver on  
6 the left connected to three tributary transceivers on  
7 the network.

8 Q. What types of modulation did they use?

9 A. Well, here, by analogy, we're showing only AM,  
10 amplitude modulation, on this network, which we pick as  
11 our one type of modulation.

12 Q. What were the drawbacks to these early  
13 communication systems that could only use one type of  
14 modulation?

15 A. There were three major drawbacks here. The first  
16 is that one type of modulation is inefficient.

17 For example, if a new modulation type came along  
18 that was better and the device could talk in that  
19 modulation type, it couldn't enter this network because  
20 this network only used one type of modulation.

21 The second problem is that the network is costly to  
22 upgrade. So if a device had a new type of modulation  
23 that worked better, all of the devices on the network  
24 had to be replaced in order to make the network operate  
25 properly.

1           And then third, this network was not backwards  
2 compatible, and that meant that a new device with a new  
3 type of modulation couldn't just enter the network and  
4 begin speaking the language that the network had to use.

5           MR. SHERWOOD: Your Honor, I -- I just would  
6 like to say I think this witness is testifying on to the  
7 validity issues of the case, and it's fine up to this  
8 point, but we need to focus on infringement.

9           THE COURT: Well, Counsel, if you have an  
10 objection to make, make an objection, but observations  
11 from counsel table aren't appropriate or welcome. If  
12 you're -- if you're objecting to his testimony, give me  
13 a legal basis. If not --

14           MR. SHERWOOD: I am objecting to the witness  
15 testifying about prior art because he's been proffered  
16 as an infringement expert, not as a validity expert.

17           MR. ENGER: Your Honor, he's an infringement  
18 expert. We're just talking about the backgrounds of the  
19 invention. We're moving on.

20           THE COURT: All right. I'll overrule the  
21 objection. Let's move on.

22           Counsel, lodge your objections in the form  
23 of -- of an objection based on a legal theory, not a  
24 statement from counsel table.

25           MR. SHERWOOD: Thank you, Your Honor.

1 THE COURT: All right. Proceed, counsel.

2 Q. (By Mr. Enger) How did Mr. Bremer's patents improve  
3 on those early communication systems that used only a  
4 single common type of modulation?

5 A. Well, Mr. Bremer's patents, as you can see on the  
6 screen --

7 MR. SHERWOOD: Your Honor, I object. It's the  
8 same question. It's the same subject matter that I just  
9 objected to, an improvement over the prior art. That's  
10 what the question is.

11 MR. ENGER: Your Honor, I respectfully  
12 disagree. This is setting the context of the invention,  
13 and we're about to explain exactly what the invention  
14 is.

15 THE COURT: Well, I'm going to overrule the  
16 objection. The witness can answer the question.

17 A. Okay. Would you please repeat the question?

18 Q. (By Mr. Enger) The question was how do Mr. Bremer's  
19 patents improve on the early communication systems that  
20 used only a single common type of modulation?

21 A. Mr. Bremer's invention improves upon that single  
22 common type of modulation by providing seamless  
23 communications using different types of modulation.

24 Q. And what does Figure 4 of Mr. Bremer's patent show?

25 A. Figure 4 looks a lot like Figure 1. It shows a

1 master transceiver on the left and three tributary  
2 transceivers connected to a network.

3 Q. Why are some of the figures labeled Type A and  
4 others Type B?

5 A. This is the difference. Some tributary  
6 transceivers, the two at the top with a blue  
7 highlighting, speak primarily Type A modulation. The  
8 tributary transceiver at the bottom with the red  
9 highlighting speaks primarily Type B modulation.

10 Q. What do we see here, Dr. Morrow?

11 A. What we see is our different types of modulations  
12 shown here as AM and FM, both existing together on this  
13 network.

14 Q. And what are the advantages to Mr. Bremer's  
15 invention?

16 A. Well, the advantages actually address each one of  
17 the disadvantages we saw earlier. For example, this is  
18 an efficient way of connecting devices.

19 Now, if a new modulation method or a new modulation  
20 type comes along that's better and more efficient, a  
21 device can begin using that right away.

22 It's less costly because the new device can enter  
23 the network and begin operating on the network without  
24 having to upgrade all the old devices. And likewise,  
25 it's backwards compatible because the new device can

1 talk with all the old devices immediately.

2 Q. How did Dr. -- did Mr. Bremer's patents teach to  
3 achieve this seamless communication using different  
4 types of modulation?

5 A. Well, Mr. Bremer's patents teach that there are two  
6 types of messages on this network, and we label those  
7 Message 170 and Message 172.

8 Q. Dr. Morrow, what figure is this from?

9 A. This is Figure 8 from Mr. Bremer's patents.

10 Q. What are messages?

11 A. Messages are just pieces of information that are  
12 sent from one device to another. For example, here we  
13 see Message 170 proceeding from the phone to the  
14 headphones, and we see Message 172 proceeding from the  
15 phone to the headset.

16 Q. Returning back to Figure 8, why are there lines  
17 drawn within these messages?

18 A. Those lines designate different parts of a message.  
19 For example, the green box is around something  
20 called a first sequence. We just name it something, the  
21 first sequence. The blue box is around the second  
22 sequence of the message. And then something called the  
23 trailing sequence is surrounded by the red box.

24 Q. And why are some of the different parts of the  
25 sequences labeled Type A modulation and Type B

1 modulation?

2 A. You can see at the top, Message 170 uses only  
3 Type A modulation throughout, but at the bottom,  
4 Message 172 begins with Type A modulation and then  
5 proceeds with Type B modulation.

6 Q. And are these the same types of modulations we  
7 discussed earlier like, for example, with AM and FM  
8 radio?

9 A. Yes. In fact, I show AM at the top and FM at the  
10 bottom as examples of different types.

11 Q. Now, Dr. Morrow, whenever a device receives one of  
12 these messages, how does it know whether it's a message  
13 like the top one or a message like the bottom one?

14 A. That's an important problem because if a receiver  
15 makes a wrong choice, then it won't receive the second  
16 sequence.

17 So what happens is something in the first sequence  
18 has to indicate a modulation change from Type A to  
19 Type B in the second sequence.

20 Q. And what do we see here in Figure 8?

21 A. Well, we see in Figure 8 a notification of change  
22 to Type B modulation exists in the first sequence of  
23 Message 172.

24 Q. Dr. Morrow, what do we see here?

25 A We see a lot of words on the left. This is

1 actually Claim 59. It says 58 at the top, but we'll  
2 talk about that later. This is Claim 59 of the '580  
3 patent.

4 And then on the right, we see our figure we just  
5 examined, and one thing we can do is play a matching  
6 game. We can match the words in the claim with the  
7 pieces of the figure.

8 Q. What do we see here?

9 A So, for example, a communication device is aimed at  
10 the master transceiver. That's the one we focus on.

11 Second, the master transceiver is capable of  
12 transmitting at least two types of modulation methods,  
13 and those are labeled Type A and Type B in the figure.

14 Third, the messages can be transmitted, and there's  
15 our messages again, 170 and 172. And each message has,  
16 like the words say, a first sequence and a second  
17 sequence.

18 And then there's -- there is at least an indication  
19 of which of the first modulation method and the second  
20 modulation method is used for modulating the second  
21 sequence.

22 A lot of words, but the picture shows something in  
23 the first sequence indicates a notification of a change  
24 to Type B modulation.

25 Q. Dr. Morrow, what does a person of ordinary skill in

1 the art look like in 1997 at the time of Mr. Bremer's  
2 invention?

3 A Well, in 1997, I felt a person of ordinary skill in  
4 the art had a bachelor's degree in electrical  
5 engineering, including communication and networking  
6 classes, and had two years of work experience in  
7 communication.

8 Q. 1997, were you such a person of ordinary skill?

9 A Yes. In 1997, I had a doctorate degree in  
10 electrical engineering and several years' experience in  
11 communications.

12 Q. Dr. Morrow, let's talk about Samsung's products.  
13 What is it about them that makes them infringe?

14 A The thing about Samsung's products that makes them  
15 infringe is they have Bluetooth inside them,  
16 specifically Bluetooth Enhanced Data Rate, or EDR.

17 Q. And what is Bluetooth?

18 A Bluetooth is just a short-range wireless  
19 communication technology in which two devices, two  
20 communicating devices, can talk to each other.

21 Q. What is Bluetooth used for? What are some common  
22 applications?

23 A Probably the most common application that many of  
24 you are familiar with, you've probably seen someone  
25 walking along that looked like he was talking to



1 himself. Well, it turns out that person probably had a  
2 Bluetooth headset on and was actually on the phone. It  
3 shocked me the first time I saw it.

4 Anyway, that's -- a major application of Bluetooth  
5 is connecting a cell phone to something called a headset  
6 or earpiece.

7 Another application is hands-free. Many states are  
8 passing hands-free laws now. Connecting your cell phone  
9 into your car audio system is also done over Bluetooth.

10 Q. Well, how does Bluetooth communicate data?

11 A Well, Bluetooth devices have inside tiny modems,  
12 modulator/demodulators.

13 Q. Dr. Morrow, when was Bluetooth first introduced?

14 A As seen on this chart, Bluetooth was first  
15 introduced with specification 1.0 in 1999.

16 Q. Were there subsequent versions of Bluetooth after  
17 Version 1.0?

18 A There were actually. Subsequent versions were  
19 released every couple of years all the way up to 4.2,  
20 which came out just last year.

21 Q. And which have these Bluetooth versions relate to  
22 Mr. Bremer's invention?

23 A Mr. Bremer's invention is Version 2.0 and later.

24 Q. And remind us of when Mr. Bremer invented his  
25 invention.

1 A His invention was invented in 1997.

2 Q. Now, how has EDR changed between when it was first  
3 introduced in 2004 until the present?

4 A There are no changes. EDR's implemented the same  
5 way all the way throughout.

6 Q. And how does EDR change, if it's used by different  
7 products, for example, cell phones or tablets or  
8 computers?

9 A EDR is used the same way or implemented the same  
10 way in all the products.

11 Q. Well, tell us what is enhanced data rate?

12 A Well, at the top, we have a Bluetooth device with  
13 no EDR. That little B in the -- in the circle, that's  
14 equivalent to the family sedan. It's sort of a slow  
15 vehicle.

16 But when EDR came along, which is our lower  
17 diagram, that's equivalent to a race car. So EDR simply  
18 increased the speed in which Bluetooth could  
19 communicate.

20 Q. And why does EDR transfer data so much faster?

21 A It does so by using two different types of  
22 modulations.

23 Q. What are those two types?

24 A The two types of modulations are called GFSK. The  
25 F stands for frequency, so that's a frequency

1 modulation. And there's a DPSK modulation method, and  
2 that is -- with a P in it that stands for phase; that's  
3 phase modulation. We'll sort of talk about what those  
4 are later.

5 Q. Dr. Morrow, let me show you Defendants'  
6 Exhibit 1043. What is this document?

7 A This document was released by the Bluetooth Special  
8 Interest Group, and it's called the Bluetooth Technology  
9 Roadmap.

10 Q. What are the advantages of Bluetooth EDR?

11 A Well, according to this document, devices  
12 implementing the EDR features take advantage of several  
13 things.

14 First is the data rate is increased up to three  
15 times the previous level. Reduced power consumption  
16 resulting in increased battery life is another example.  
17 Improved Bluetooth experience by running multiple  
18 Bluetooth devices simultaneously and transferring large  
19 files a lot quicker.

20 And then there are improved use cases. That's you  
21 and I that use -- or you and me that use these Bluetooth  
22 devices, including streaming audio, digital image  
23 transfer, laser printing -- a lot more convenient for  
24 us.

25 And then very important is Bluetooth 2.0+EDR allows

1 the devices to be backwards-compatible. They'll still  
2 work with the older Bluetooth devices.

3 Q. Let me show you Plaintiff's Exhibit 238,  
4 Dr. Morrow. What is this exhibit?

5 A This is one of the Samsung internal documents  
6 that's called Enhanced Data Rate Applications.

7 Q. What did Samsung say were the three key advantages  
8 of EDR?

9 A Well, these actually mirror a little bit what we  
10 saw before. They say there's a 3X increase, 3 times  
11 increase in usable payload data rate. They said for a  
12 given amount of data transfer, the radio needs to be on  
13 for less time. There's your key for using less power.

14 And then additional bandwidth enables multiple-use  
15 scenarios. So there's more flexibility here.

16 Q. Samsung did not implement EDR. Would its customers  
17 get all those same key advantages?

18 A No. Those are EDR advantages as listed.

19 Q. Dr. Morrow, let me show you Plaintiff's Exhibit 23.  
20 What do we see here?

21 A Now, this is the specification of the Bluetooth  
22 system, at least the cover page. The specification  
23 itself is 1200 pages. This is the core version for  
24 2.0+EDR.

25 Q. What do we see here on the page labeled SAM 99669?

1 A These are the two main packets used in Bluetooth.

2 Q. And let me blow them up for you.

3 Dr. Morrow, tell us about these two messages.

4 A There are two messages that you can see. At the  
5 top, there's a message called the basic rate packet.  
6 And at the bottom, we see a message called the enhanced  
7 data rate, or EDR, packet.

8 Q. Tell us about the structures of these messages.

9 A Well, we can see in each of the two messages  
10 there's a first sequence that contains the access code  
11 and the header followed by a payload, which is called  
12 the second sequence.

13 Q. And what types of modulation methods do the first  
14 sequences use?

15 A The first sequence in both packets, both messages,  
16 use GFSK. That's frequency modulation, and we  
17 designated that with -- with the English flag.

18 Q. What types of modulation do the second sequences  
19 use?

20 A Well, that depends upon the message. At the top,  
21 the second sequence also uses GFSK, our English analogy.  
22 So both modulation methods are the same there.

23 At the bottom, we have a change in modulation to  
24 DPSK, or phase modulation, for the second sequence.

25 Q. Well, how do these Bluetooth messages compare to

1 the messages from Mr. Bremer's patents?

2 A Well, they're -- they're very similar as you can  
3 see on the screen. What I've done is I've put message  
4 170 for Mr. Bremer's patent alongside the Bluetooth  
5 basic rate packet, and message 172 from Mr. Bremer's  
6 patent alongside the Bluetooth EDR packet.

7 Q. And how do the structures and modulation methods  
8 compare?

9 A Well, we can see, for example, that each of the  
10 messages has a first sequence and a second sequence. At  
11 the top, all the messages use only one type of  
12 modulation.

13 And at the bottom, we find out that in Mr. Bremer's  
14 packet -- patent, the second sequence is modulated using  
15 a different type, Type B modulation.

16 And likewise in the Bluetooth EDR packet, we also  
17 see the second sequence as modulated using a different  
18 type of modulation.

19 So here's our flag analogy. We've got English, the  
20 GFSK, frequency modulation, shown; and we have Chinese,  
21 the DPSK, phase modulation, shown in the various places.

22 Q. Dr. Morrow, let's return to the slide with the  
23 accused Samsung products. How many of these products  
24 include Bluetooth EDR?

25 A Now all of these products do.

1 Q. And what do you call these products?

2 A These products I call the Samsung Bluetooth EDR  
3 products.

4 Q. For purposes of your infringement analysis, do all  
5 of the accused Samsung Bluetooth EDR products infringe  
6 in the same way?

7 A In the same way, yes.

8 Q. Are there any material differences with respect to  
9 these products for your infringement analysis?

10 A No.

11 Q. Dr. Morrow, what claim of the '580 -- claims of the  
12 '580 patent did you conclude that Samsung infringed?

13 A. Well, I believed that Samsung products infringed at  
14 least Claims 2 and 59.

15 Q. Well, we'll address each of those individually.  
16 Let's start a little bit out of order with Claim 59.

17 THE COURT: Let's break right here, Counsel.  
18 Approach the bench, please.

19 (Bench conference.)

20 THE COURT: I assume you're going to get into  
21 the specifics of your claims --

22 MR. ENGER: We're ready to --

23 THE COURT: -- and this is a good place to  
24 break for the evening?

25 MR. ENGER: This is a good spot.

1 MR. SHERWOOD: Thank you, Your Honor.

2 (Bench conference concluded.)

3 THE COURT: Ladies and gentlemen, based on  
4 what counsel have told me, they're about to begin a  
5 segment of testimony that will take some time, so we're  
6 going to use this as a juncture to break for the  
7 evening.

8 I'm going to ask you to take your notebooks  
9 and leave them on the table in the jury room as you exit  
10 the courthouse for the evening.

11 I'm going to ask you to be in the jury room by  
12 about 8:20 so that we can start as close to 8:30 as we  
13 can in the morning.

14 And I'm going to remind you again not to  
15 discuss the case among yourselves and particularly not  
16 to discuss the case with anyone else, especially when  
17 you get home tonight.

18 This is that first real point of temptation  
19 where somebody's going to ask you what you've done all  
20 day. And just make sure you don't answer that question  
21 and tell them that I've told you not to.

22 I've instructed you not to. Blame it on me.  
23 But it's critical that you not talk about your jury  
24 service or anything that you've heard or anything that's  
25 been presented to you.



1           So don't discuss the case with anyone. Don't  
2 attempt to do any research about any of the concepts or  
3 ideas you've heard about. Follow all the same  
4 instructions that I gave you earlier today.

5           With that, I wish you travels safely to your  
6 homes, and I'll see you in the morning at 8:30. You're  
7 excused until that time.

8           COURT SECURITY OFFICER: All rise for the  
9 jury.

10           (Jury out.)

11           THE COURT: All right. Counsel, I'll be in  
12 chambers by 7:30 in the morning.

13           Also, I remind you that before we bring the  
14 jury in, I want a representative of each side to read  
15 into the record the exhibits that were used during  
16 today's portion of the evidence.

17           With that, we stand in recess.

18           COURT SECURITY OFFICER: All rise.

19           (Court adjourned.)

20           \*\*\*\*\*

21

22

23

24

25

CERTIFICATION

I HEREBY CERTIFY that the foregoing is a correct transcript from the stenographic notes of the proceedings in the above-entitled matter to the best of my ability.

<u>/s/Shelly Holmes</u>	<u>2/9/15</u>
SHELLY HOLMES, CSR, TCRR	Date
Official Court Reporter	
State of Texas No. 7804	
Expiration Date: 12/31/16	